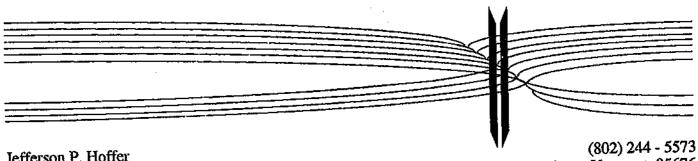
REPORT ON HYDROGEOLOGIC INVESTIGATION MID-TOWN PLAZA MOBIL MILTON, VERMONT

FEBRUARY, 1994



Jefferson P. Hoffer Consulting Hydrogeologist

P.O. Box 428, Waterbury, Vermont 05676

Hydrogeologic Investigation Mid-town Plaza Mobil, Milton, Vermont

February, 1994

Prepared For:

S.B. Collins, Inc. St. Albans, Vermont

Prepared By:

Jefferson P. Hoffer Consulting Hydrogeologist Waterbury, Vermont

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1.0 BACKGROUND AND SITE DESCRIPTION

1.1 Background

S.B. Collins, Inc., operates a Mobil station at the Mid-town Plaza in Milton, Vermont. As part of a recent renovation, four USTs were excavated and removed from the site. Three 10,000-gallon gasoline USTs and one 10,000-gallon diesel UST were removed on August 17, 1993. The tanks were in use for approximately 11 years, and passed leak-detection tests six weeks prior to their removal (report on file with the State). During excavation and removal of the gasoline tanks, the surrounding soils were screened with a photoionization detector (PID). Although no holes were found in the tanks, elevated PID readings were detected in soils surrounding the gasoline tanks. Laboratory analysis of soil samples revealed the presence of MTBE and BTEX compounds, indicative of historical releases of gasoline. Additional information concerning the tank removals is summarized in an initial site assessment report, which is included in Appendix A.

The Vermont Department of Environmental Conservation's Sites Management Section (SMS) requested that an investigation be performed to define the nature and extent of contamination at the site. The SMS letter, and scope of work for investigation are included in Appendix A.

1.2 Site Description

The Mid-town Plaza Mobil (site) is located in a commercial setting along US Route 7 in Milton, Vermont. Figure 1 presents a site location map. The site includes the Mid-town Plaza and the Mobil gasoline station/mini-mart. The site is bounded by Route 7 on the west and Fairfield Street to the north. A vacant lot borders the eastern perimeter of the site, and the Milton Professional Center borders the southern perimeter of the site. Figure 2 presents a site vicinity map.

The site is situated on the eastern margin of the Champlain Lowland, with the Green Mountains to the east. The topography of the site is level, and elevation at the site is approximately 350 feet above mean sea level (MSL). Major surface-water features in the region include Arrowhead Lake and the Lamoille River, which are located about one mile north and northeast of the site. The southward-flowing Malletts Creek is located about 3000 feet east of the site. Smaller unnamed streams are shown on Figure 1 and include

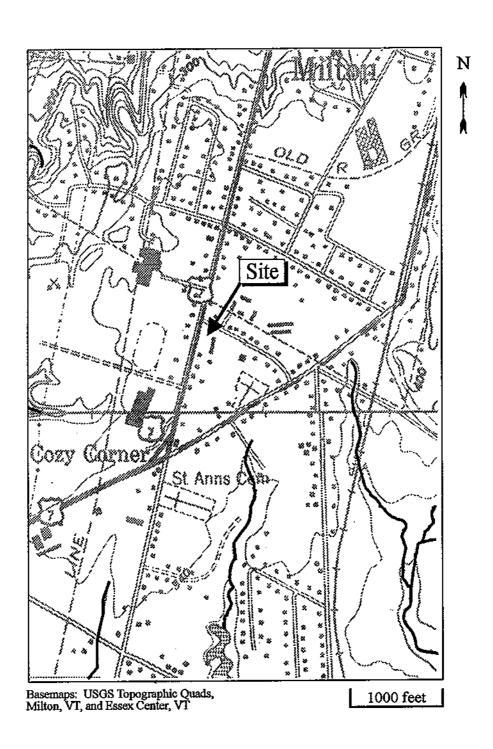
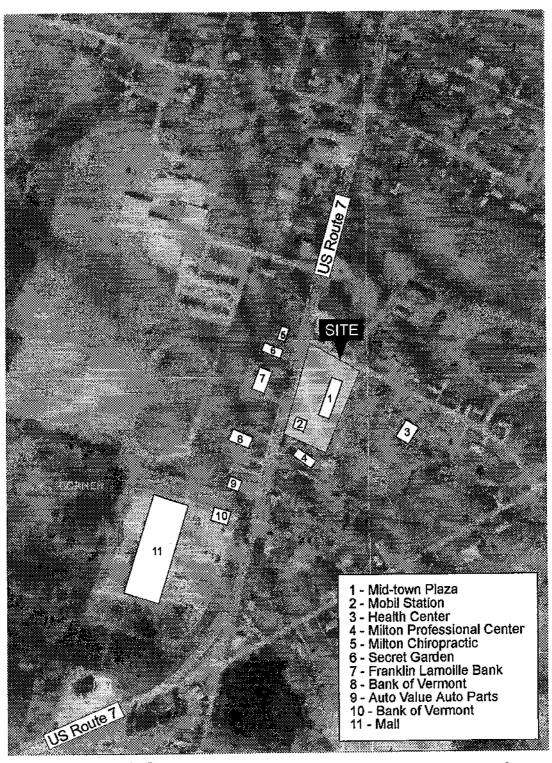


FIGURE 1 Site location map, Mid-town Plaza Mobil, Milton, Vermont.



Basemap: Vermont Mapping Program Orthophoto Sheet 100236

400 feet

FIGURE 2 Vicinity map, Mid-town Plaza Mobil, Milton, Vermont.

three southward-flowing streams originating south of the site. The nearest of these three streams is about 1000 feet southeast of the site. Each of the these three streams originate at an approximate elevation of 340 feet above MSL. Another stream originates about 1500 feet southwest of the site, behind the Mall complex. This stream originates at an elevation of about 280 feet above MSL and flows northwestward toward the Lamoille River.

The surficial geology is mapped as pebbly marine sand on the Surficial Geologic Map of Vermont (Doll, 1970). Underlying bedrock is shale according to Stewart's (1974) generalized bedrock geologic map. Well logs for selected water wells in the vicinity (south of the site) are included in Appendix B. Approximate well locations are included on a site location map in Appendix B. The water well logs indicate an extensive deposit of unconsolidated material above bedrock. At least three unconsolidated units are represented; a surficial layer of sand to depths ranging from 10 to 160 feet, a layer of blue clay to depths ranging from 60 to 230 feet, underlain by water-bearing sands and gravels, and glacial till. Depth to bedrock ranges from 98 to 304 feet, and is reported as limestone, shale, and slate. About half of the wells included in Appendix B are completed in the water-bearing sands or gravel present above bedrock.

2.0 FIELD INVESTIGATION PROCEDURES

2.1 Monitoring Well Installation

Seven groundwater monitoring wells were installed at the site during two field efforts. Five wells were installed on November 1-2, 1993. Two additional wells were installed on December 17, 1993. Borings were advanced using 4.25" ID hollow-stem augers. Split-spoon soil samples were collected to observe soil conditions and to screen samples for contamination with a PID. Both split-spoon samples and cuttings returned on the auger flights were visually examined and described in the field. Soil samples from the split spoons were placed into glass jars for headspace analysis using a PID. The PID was also utilized to detect zones of contamination during auger advancement, and for health and safety monitoring.

The monitoring wells were constructed with 10-foot sections of factory-slotted PVC screen (0.020-inch) and PVC riser. Wells were constructed so that approximately five feet of screen remained above the water table to enable the detection of floating petroleum, and to account for water-table fluctuations. The well screens were backfilled with coarse sand as the augers were retracted. The sandpack was extended about two feet above the top of the screen. A layer of granular bentonite was placed on top of the sandpack. Protective manhole covers were cemented into place around each well. Wells MW-1 through MW-5 were developed using an air-displacement pump. Geologic logs and monitoring well construction details are provided in Appendix C.

Land surveyor Steven Brooks of St. Albans, Vermont, was contracted to provide a site basemap and elevations of the monitoring wells. Elevations were obtained at each well for ground surface and the top of the 2-inch PVC riser. Elevations were measured relative to 100.00 feet assigned to a benchmark. Figure 3 presents the site map.

2.2 Groundwater Sampling and Analysis

The first five monitoring wells were sampled on November 9, 1993. Monitoring wells MW-6 and MW-7 were sampled on December 20, 1993. Prior to sampling, well headspace (PID), water level, and free-product measurements were taken in each well. The monitoring wells were bailed of at least three well volumes prior to sampling. Samples were collected using a TeflonTM bailer. Samples were transferred from the bailer

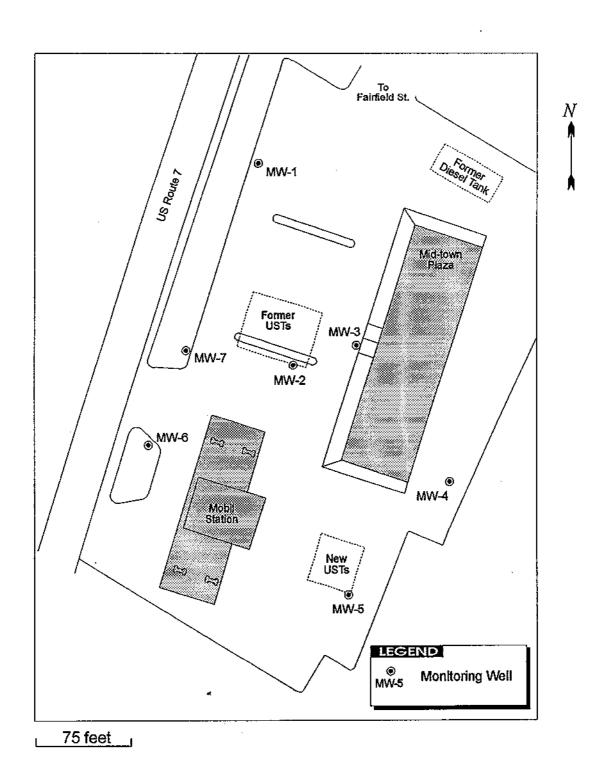


FIGURE 3
Site map, Mid-town Plaza Mobil, Milton, Vermont.

to laboratory-supplied 40 mL vials containing hydrochloric acid, using a bottomemptying stopcock to minimize sample agitation. Samples were labeled and placed into a cooler with ice. Sampling equipment was decontaminated between each well using an AlconoxTM scrub/tap water rinse/methanol rinse/distilled water rinse. All purge water generated during sampling was containerized on site in a 55-gallon drum.

Sampling proceeded from "clean" to "dirty" based on observations during well installation and well headspace PID readings prior to sampling. Quality assurance/quality control samples included a trip blank supplied by the laboratory, a field/equipment blank, and a blind duplicate collected during the November 9, 1993 sampling event. The trip blank was transported to the site, handled the same as the other samples, and returned to the laboratory for analysis. The duplicate sample was collected at well MW-5 and was labeled MW-A. A field/equipment blank was prepared using laboratory-supplied analyte-free water to gauge the effectiveness of the decontamination procedure and possible sample exposure to air-borne contaminants. The December 20, 1993 sampling event included a trip blank.

The groundwater sampling events were documented on a field data sheet and a laboratory chain-of-custody. Samples were hand-delivered to Scitest Laboratory Services, Randolph, Vermont, and analyzed for methyl-tert-butyl-ether (MTBE) and benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA SW-846 Method 8020. The field data sheet, analytical reports, and chain-of-custody are included in Appendix D.

2.3 PID Measurements

A Photovac MicroTIP HL-2000 photoionization detector, equipped with a 10.6 eV bulb, was utilized to monitor for the presence of organic vapors during field investigations. The PID was utilized during drilling to screen for contamination and to perform headspace analyses on soil samples. Measurements of well headspaces were also taken during water-level measurements and groundwater sampling events. Prior to each days use, the PID was calibrated with an isobutylene standard, following the manufacturer's operating procedures.

3.0 RESULTS

3.1 Hydrogeologic Setting

Surficial Geology

Descriptions of the split-spoon samples are included on the geologic logs in Appendix C. Well-sorted and well-rounded medium and coarse-grained sands predominate across the site to a depth of approximately 15 feet. Lower-permeability finer-grained sands, silty sands, and silt loam were encountered below 15 feet in some of the boreholes, although no laterally-continuous lower-permeability layer was encountered. Based on the observed stratigraphy, the effective hydraulic conductivity for the site is likely in the range of 10^{-2} to 10^{-3} cm/sec (2.8 to 28 ft/day).

Groundwater Elevation and Flow Direction

Groundwater elevations measured at the site are presented on Table 1. Figure 4 presents a groundwater contour map, which illustrates a generally westward flow direction. This westward flow component suggests that shallow groundwater at the site flows toward to and ultimately discharges into the small stream 1500 feet southwest of the site. The hydraulic gradient across the site ranges from 0.01 to 0.007 ft/ft.

Groundwater Flow Rates

Based on the measured hydraulic gradient and estimates of hydraulic conductivity and effective porosity, groundwater flow rates can be calculated using the average linear velocity equation.

Using an effective porosity value of 0.2, gradient values of 0.01 to 0.007, and hydraulic conductivity values of 10^{-2} to 10^{-3} cm/sec, calculated flow rates are on the order of 35 to 500 feet/year.

TABLE 1
Groundwater elevations, Mid-town Plaza Mobil, Milton, Vermont.

 $oldsymbol{1}$

Well	Elevation of	Elevation of	11/3/	93	3 11/9/93		12/:	20/93
ID	Ground Surface	Top of Casing	Depth to	Groundwater	Depth to	Groundwater	Depth to	Groundwater
	(feet)	(feet)	Water from	Elevation	Water from	Elevation	Water from	Elevation
!			TOC (feet)	(feet)	TOC (feet)	(feet)	TOC (feet)	(feet)
MW-1	96.20	95.71	18.84	76.87	18.77	76.94	18.76	76.95
MW-2	95.62	95.27	18.75	76.52	18.69	76.58	18.70	76.57
MW-3	95.62	94.83	17.85	76.98	17.84	76.99	17.75	77.08
MW-4	95.59	95.39	17.25	78.14	17.01	78.38	17.17	78.22
MW-5	95.83	95.32	17.59	77.73	17.59	77.73	17.53	77.79
MW-6	96.42	96.13					20.20	75.93
MW-7	97.04	96.69					20.48	76.21

NOTES:

TOC - top of casing

Benchmark - Top of Hydrant North of MW-1, Elev. = 100.00 feet

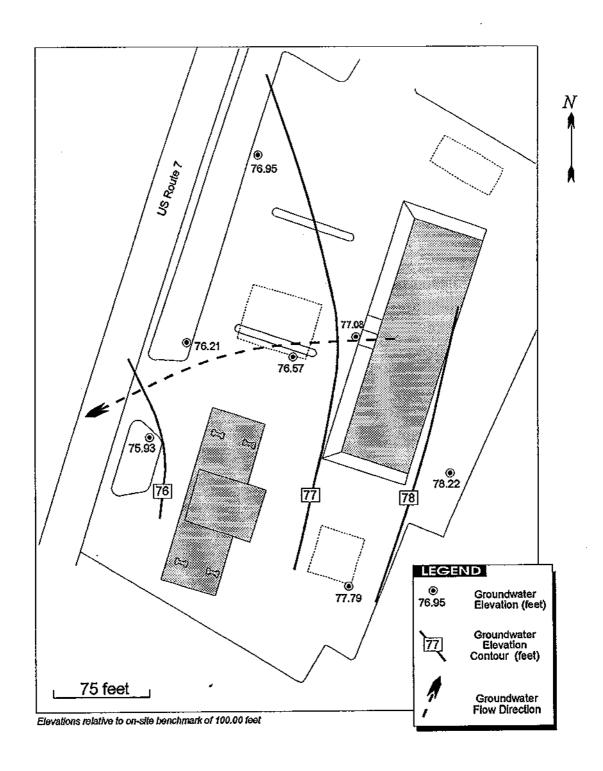


FIGURE 4
Groundwater contour map, December 20, 1993,
Mid-town Plaza Mobil, Milton, Vermont.

3.2 Groundwater Sampling Results

Groundwater sampling results are presented on Table 2. High concentrations of BTEX and MTBE were detected in MW-2, in the 1 to 25 mg/L range. Benzene and xylenes were detected in the 10 to 500 μ g/L range in MW-6 and MW-7, which are downgradient from the former gasoline tank locations. MTBE was also detected in MW-6 at a concentration of 12 μ g/L. Low concentrations of benzene, toluene and MTBE were detected in MW-3, which is slightly upgradient from the former gasoline tank locations. Toluene was detected at trace levels (3 μ g/L) in MW-5.

BTEX and MTBE data on Table 2 are presented on isoconcentration contour maps on Figures 5-9. The isoconcentration maps define a plume of dissolved-phase contamination migrating west and southwestward from the former gasoline tank locations. The downgradient extent of the plume has not been defined.

3.3 PID Measurements

PID measurements of soil samples collected during well installation, and well headspace measurements taken during groundwater sampling events are presented on Table 3. Elevated headspace readings indicative of groundwater contamination were detected in soil samples collected just above and below the water table in wells MW-2 and MW-3. Elevated readings were also detected in MW-7 in the 24 - 26 foot interval.

3.4 Free Product

No free-product accumulations have been detected in the site monitoring wells. No sheens were visible on waters purged from the wells prior to sampling.

TABLE 2
Groundwater sampling results, Mid-town Plaza Mobil, Milton, Vermont.

November 9, 1993 Results in μg/L					
WELL ID	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Trip Blank	<2	<2	- 2	-<2	42
JMW-1	- €2	<2	- 22	<2	<2
MW-2	1,920	4,100	1,430	6,800	25,600
MW-3	4	4	- 42	×2,	64
MW-3 Field Duplicate	4	3	42	€2	64
MW-4	Ŕ	-42	- 42	<2	-22
MW-5	<2	3	- 2	<2	3
Field Blank	- 2	₹2	- 22	- 2	<2

()		Pecember 20, 19 Results in μg/L			
WELL ID	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
Trip Blank	~ 1	7 1	-7	ci .	<1
MW-6	8	<1	7	19	12
MW-7	150	<100	<100	590	<100

NOTES: <2 = below a practical quantitation limit of 2

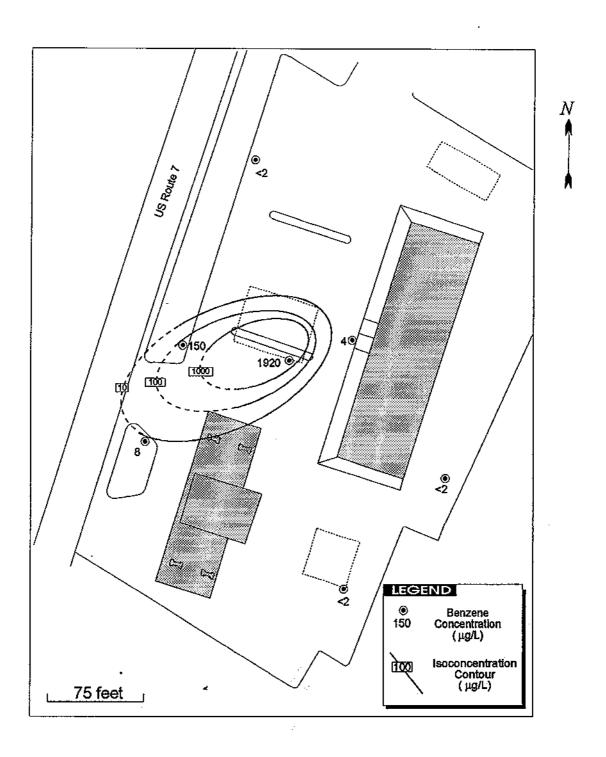


FIGURE 5
Benzene isoconcentration map,
Mid-town Plaza Mobil, Milton, Vermont.

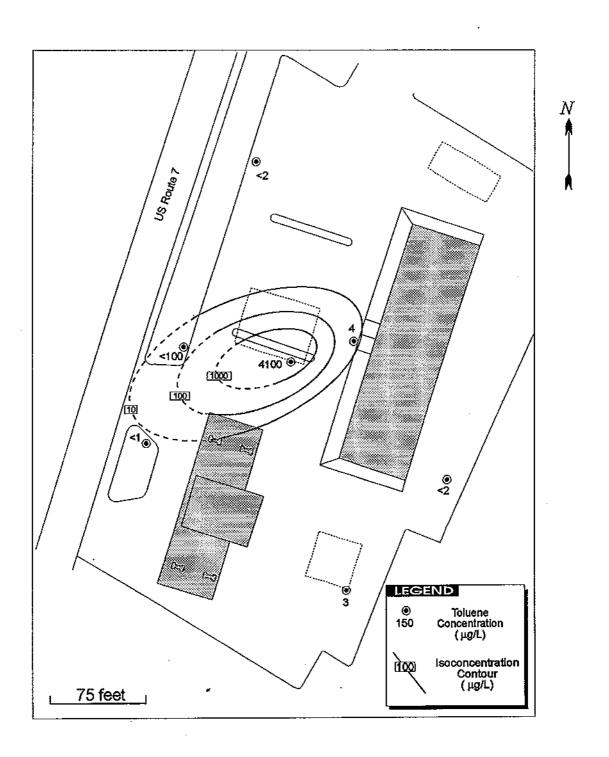


FIGURE 6
Toluene isoconcentration map,
Mid-town Plaza Mobil, Milton, Vermont.

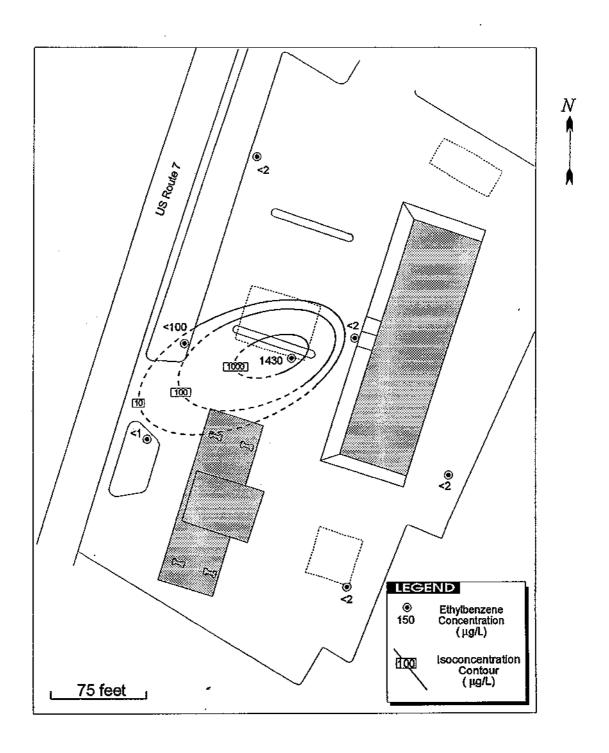


FIGURE 7
Ethylbenzene isoconcentration map,
Mid-town Plaza Mobil, Milton, Vermont.

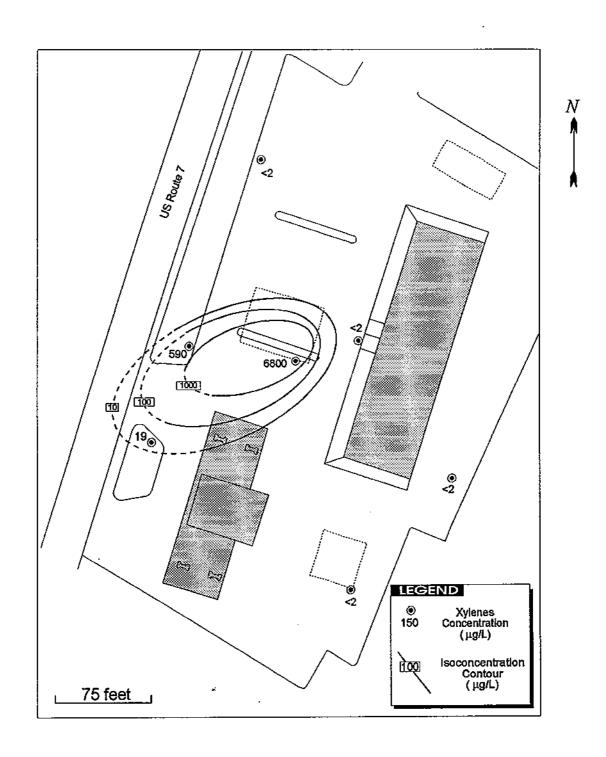


FIGURE 8

Xylenes isoconcentration map,
Milton Mid-town Mobil, Milton, Vermont.

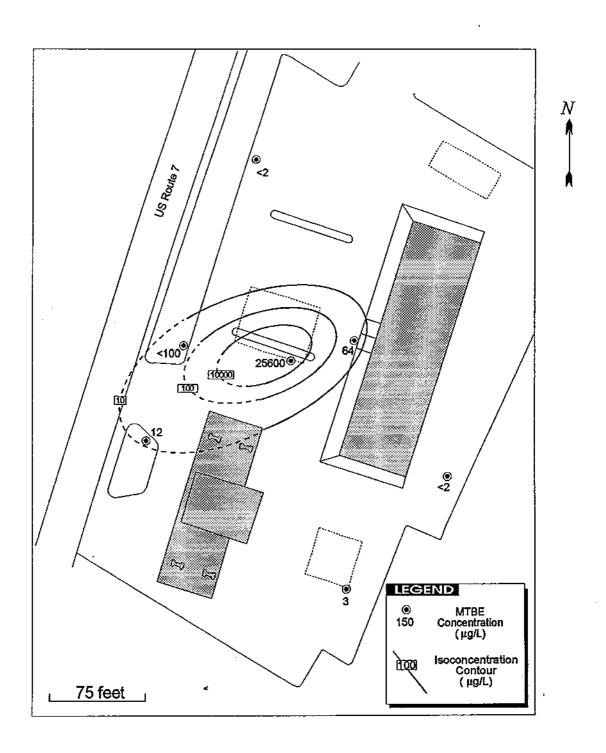


FIGURE 9
MTBE isoconcentration map,
Mid-town Plaza Mobil, Milton, Vermont.

TABLE 3
PID measurements of soil samples and well headspaces,
Mid-town Plaza Mobil, Milton, Vermont.

WELL HEADSPACE READINGS

Well	11/3/93	12/20/93
ID	PID	PID
	Reading	Reading
	(ppm)	(ppm)
MW-1	0.5	
MW-2	227	
MW-3	72	
MW-4	0.2	
MW-5	0.8	
MW-6		0.7
MW-7		0.8

SOIL SAMPLE HEADSPACE READINGS

MV	V-1	MV	V-2	MV	V-3	M\	V-4	M\	V-5	. N	∕IW-6	M	W-7
Depth	PID	Depth	PID										
(feet)	(ppm)	(feet)	(ppn										
5-7	0.4	5-7	0.0	5-7	0.0	5-7	0.0	5-7	0.0	4-6	0.8	4-6	1.6
10-12	0,3	10-12	0.0	10-12	0.0	10-12	0.0	10-12	0.0	9-11	0.9	9-11	1.4
15-17	0.2	15-17	162	15-17	25.6	15-17	0.0	15-17	0.0	14-16	2.0	14-16	1.7
20-22	0.2	20-22	0.7	20-22	0.0	20-22	0.0	20-22	0.0	19-21	0.8	19-21	8.1
25-27	0.2	25-27	0.0	25-27	0.1					24-26	0.8	24-26	91.3

NOTES:

Headspace readings taken with MicroTIP HL-2000, 10.6 eV bulb, calibrated to isobutylene

4.0 DISCUSSION OF RESULTS

4.1 Source and Extent of Contamination

Impacts to soil and groundwater indicate historical releases of gasoline in the vicinity of the former gasoline tank locations. Since no holes were found in the tanks (which passed leak-detection tests six weeks prior to removal), the source of the releases is unknown, possibly due to overfilling or leaks in the piping runs. Due to the sandy nature of the site soils, releases of petroleum product at the site have readily impacted groundwater, which occurs at a depth of 17 to 20 feet. Groundwater sampling has defined a plume of dissolved-phase contamination migrating west and southwestward away from the former tank locations. The highest concentrations of BTEX and MTBE are present in MW-3, which is adjacent to the former gasoline tanks. The downgradient and lateral extent of contamination has not been defined. The plume may extend beneath US Route 7 and further south and west.

4.2 Potential Receptors

The immediate vicinity is serviced by municipal water. A map of the distribution system in the vicinity is included in Appendix B. The State's water well database was reviewed to identify water wells in the vicinity. Figure B-1 (Appendix B) presents approximate locations of selected nearby water wells. The closest wells are over 1000 feet south of the site. As mentioned previously, about half of these water wells are completed in bedrock, and half are screened (or completed with open-ended casing) in the water-bearing sands and gravels just above bedrock. Based on the site groundwater flow directions, it is unlikely that site contamination could impact any nearby water supplies.

The threat of petroleum vapor migration and accumulation appears to be limited. The structures on the site do not have basements, and the depth to groundwater at the site is 17 to 20 feet, far below buried utilities.

Groundwater elevations at the site suggest that shallow groundwater at the site ultimately discharges into a small stream which originates approximately 1500 feet southwest of the site. It appears unlikely that contamination at the site could impact this stream.

4.3 Conclusions and Recommendations

Impacts to soil and groundwater at the site indicate historical releases of gasoline in the vicinity of the former gasoline tank locations. Due to the sandy nature of the site soils, releases of gasoline at the site have readily impacted groundwater, which occurs at a depth of 17 to 20 feet. Groundwater sampling has defined a plume of dissolved-phase contamination migrating west and southwestward away from the former tank locations. The highest concentrations of BTEX and MTBE are present in MW-3, which is adjacent to the former gasoline tanks. The downgradient and lateral extent of contamination has not been delineated.

Although the existing data does not indicate that potential receptors are threatened by groundwater contamination detected at the site, and the apparent source has been removed, additional investigation is warranted to define the downgradient extent of contamination. It is recommended that additional groundwater monitoring be performed to further characterize site conditions and the downgradient extent of contamination. Three additional monitoring locations are proposed, as shown on Figure 10. Periodic groundwater sampling events should be performed to assess the levels of contaminants at the site, and site groundwater conditions. This information can be utilized to assess whether or not active remedial measures or additional monitoring may be appropriate at the site.

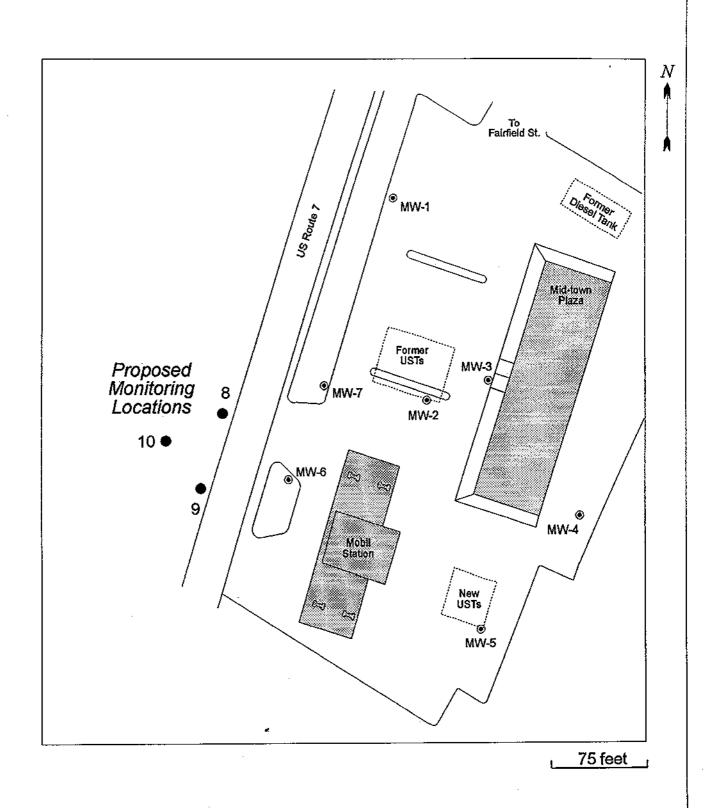


FIGURE 10
Proposed monitoring locations,
Mid-town Plaza Mobil, Milton, Vermont.

REFERENCES

Doll, C.G. (Ed.), 1970, Surficial Geologic Map of Vermont, State of Vermont.

Stewart, D.P., 1974, Geology for Environmental Planning in the Milton-St. Albans Region, Vermont. Environmental Geology No. 5, Vermont Geological Survey, Water Resources Department, Montpelier, Vermont.

APPENDIX A:

Relevant Correspondence

August 20, 1993

Mr. Carl Ruprecht UST Manager S.B. Collins, Inc. 54 Lower Weldon Street St. Albans, VT 05478

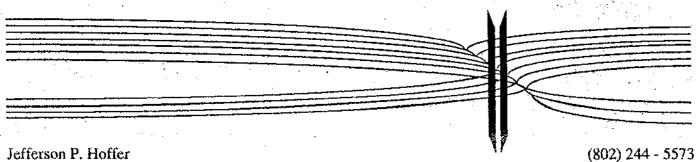
Re: UST Removals, Midtown Plaza Short Stop, Milton, Vermont

Dear Carl:

This letter summarizes my observations during the removal of four USTs at the Midtown Plaza Short Stop site in Milton, Vermont, on August 17, 1993. One 10,000-gallon diesel and three 10,000-gallon gasoline tanks were removed. These tanks were reportedly 11 years old and recently passed pressure tests.

The site is located in Milton, along U.S. Route 7, as shown on Figure 1. Figures 2 and 3 are sketches of the site which show the former location of the tanks and soil sampling locations. During the tank removals, soils were screened for contamination using an HNU (10.2 eV bulb) photo-ionization detector (PID). Prior to its use, the PID was calibrated and checked with an isobutylene standard. Headspace readings were taken by placing soils in pint-size ziplock bags (half full), shaking the sample, and then inserting the tip of the PID to record the peak vapor concentration.

Surrounding land uses include businesses along Route 7, a school west of the site, a health center to the east, and residences north and east of the site. Businesses and residences in the vicinity are served by municipal water. The State's well log database was reviewed to identify nearby domestic wells. No wells were found within 500 feet of the site, although wells are present approximately 1000 feet south and east of the site (see Figure 1). The Milton water department is sending me a copy of their distribution map, which will indicate the extent of municipal water in the vicinity.



Jefferson P. Hoffer Consulting Hydrogeologist

P.O. Box 428, Waterbury, VT 05676

Mr. Carl Ruprecht August 20, 1993 Page 2

According to the Surficial Geologic Map of Vermont, the site is underlain by pebbly marine sand. The nearest mapped surface water feature is over 1000 feet south of the site, and a tributary of Malletts Creek is located about 2000 feet east of the site. Both of these streams flow southward.

DIESEL TANK - D1

Soils surrounding D1 consisted of brown, uniform sand (medium to coarse-grained) with occasional fine gravel. No groundwater was encountered during the excavation, and the lack of significant soil mottling indicates no impeded drainage or perched groundwater zones in the vicinity. There were no visible signs of a release from D1, and no readings were detected through PID screening of soils. After removal from the ground, the tank was visually inspected. In general, the tank was in good condition. No holes or significant corrosion surfaces were found. Soil samples for laboratory analysis were collected from beneath the spine of the tank in two locations (see Figure 3). Companion samples were collected at these locations for headspace analysis with the PID. No readings were detected with the PID. The laboratory samples were submitted to Scitest Laboratories of Randolph, Vermont, for total petroleum hydrocarbons analysis (EPA Method 418.1 modified for soil). Sample results should be available within two weeks or so.

GASOLINE TANKS (G1, G2, and G3)

Soil conditions encountered during excavation of the gasoline tanks were similar to those encountered during removal of the diesel tank. Each tank was in good condition and no holes or significant corrosion surfaces were found. There were no visible indications of a release in the surrounding soils, although elevated PID readings were noted in soils surrounding and underlying the tanks. PID readings ranged from 0 to 300 ppm. The highest readings were found beneath and alongside the bottom of the tanks. These soils were removed from the pit and later moved to an on-site stockpile. Although additional soils underlying the excavation and on the sidewalls exhibited headspace readings on the order of 10 to 50 ppm, these soils were left in place. Excavated soils with PID readings exceeding 20 ppm were stockpiled on site (see location of Figure 2). Excavated soils with PID readings less than 20 ppm were backfilled.

After removal of the three tanks, soil was excavated below the west end of tank G-3 to an approximate depth of 12 feet below grade (2-3 feet below the bottom of the tank). A change in stratigraphy was noted at approximately 11 feet below grade. Below 11 feet, a clean, fine-grained sand was encountered.

Two surface-water catch basins are located near where the gasoline tanks were located (Figure 2). No readings were detected in the catch basin east of tank G1. At the other catch basin, north of the gasoline tanks, a reading of 1.0 ppm was noted. Based on these

Mr. Carl Ruprecht August 20, 1993 Page 3

readings, and the lack of a basement in the Milton Discount Beverage and Deli, there does not appear to be a significant vapor migration or accumulation problem at the site.

Four soil samples were collected for laboratory analysis. Samples G1-A and G1-B were collected from six inches beneath the bottom of tank G1. Sample G3-A was collected approximately 2 feet below tank G-3, and below the change in stratigraphy from medium/coarse sand to fine sand. Sample G3-A was collected on the sidewall east of tank G-3, at a depth of 5 feet below grade. The soil samples were submitted to Scitest for VOC analysis. Headspace readings for companion samples collected at each sampling location are given below.

Sample	Headspace (ppm)
G1-A	45
G1-B	300
G3-A	150
G3-B	50

The laboratory results should be available within two or three weeks. The analytical results, along with information concerning the extent of municipal water in the vicinity, can be used to evaluate what additional efforts may be necessary at the site.

I took a number of photographs during the tank removals and will forward these to you as soon as I receive them.

Sincerely,

Jefferson P. Hoffer

Consulting Hydrogeologist

att.

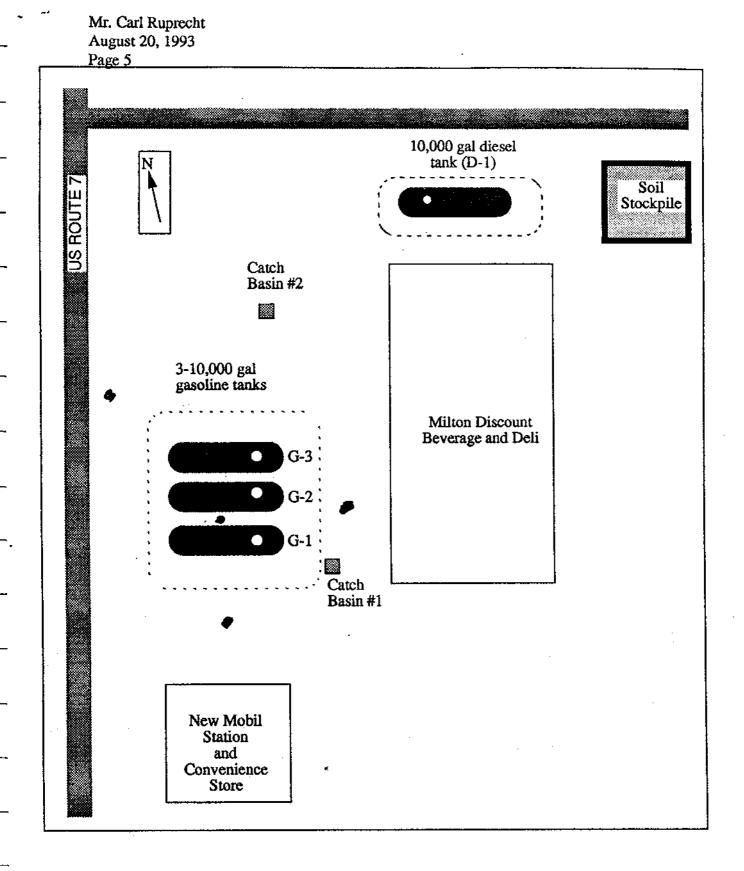
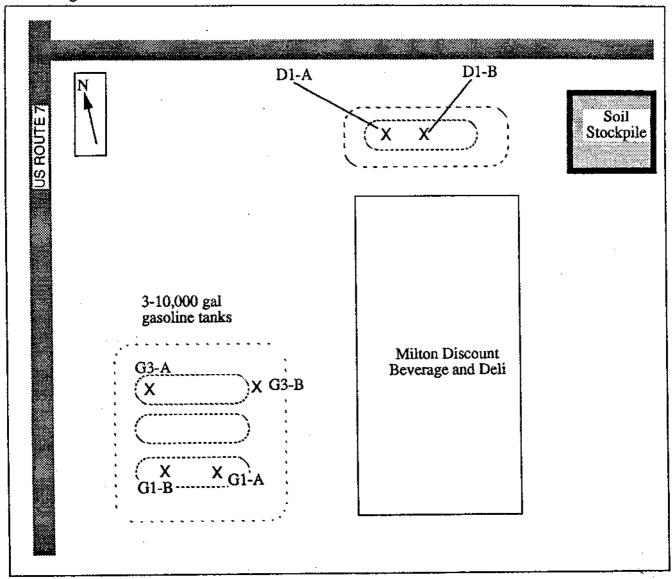


FIGURE 2
Sketch of Milton Mobil Site Showing Former Tank Locations.



X - Soil Sampling Locations

- D1-A, Six Inches Beneath Tank D1 (under fill pipe) D1-B, Six Inches Beneath Tank D1
- G1-A, Six Inches Beneath Tank G1 (under fill pipe) G1-B, Six Inches Beneath Tank G1

- G3-A, Two Feet Beneath Tank G-3 G3-B, Sidewall, Five Feet Below Grade

FIGURE 3 Soil Sampling Locations.



LABORATORY REPORT

P.O. Box 339 Randolph, Vermont 05060-0339 (802) 728-6313

CLIENT NAME: Jefferson P. Hoffer Consulting Hydrologist PROJECT NO .:

LABORATORY NO.: 3-1410

P.O. Box 428

70249

Waterbury, VT 05676

DATE OF SAMPLE:

8/17/93

S B Collins/Milton Mobile

DATE OF RECEIPT:

8/18/93

DATE OF ANALYSIS:

8/26/93

ATTENTION:

SAMPLE LOCATION:

ADDRESS:

Jeff Hoffer

DATE OF REPORT:

9/13/93

RESULTS

(ug/kg micrograms per kilogram [ppb], dry weight)

<u>PARAMETER</u>	<u>G1 A</u>	<u>G1 B</u>	<u>G3 A</u>	<u>G3 B</u>
Methyl Tertiary Butyl Ether	75	<10000	BPQL	104
Benzene	22	< 10000	BPQL	10
Toluene	25	43200	5	17
Ethylbenzene	58	< 10000	BPQL	5
Total Xylenes	423	526000	17	109
_Chlorobenzene	\mathtt{BPQL}	< 10000	BPQL	BPQL
1,2-Dichlorobenzene	BPQL	< 10000	BPQL	BPQL
1,3-Dichlorobenzene	BPQL	< 10000	BPQL	BPQL
_1,4-Dichlorobenzene	BPQL	< 10000	BPQL	BPQL
Surrogate % Recovery	89%	91%	78%	88%

-EPA Method 8020

BPQL = Below Practical Quantitation Limit, 5 ug/kg (ppb), except as noted.

Respectfully submitted, SCITEST, ANC.

Roderick J. Lamothe Laboratory Director

RJL/ph

LABORATORY REPORT

CLIENT NAME: Jefferson P. Hoffer LABORATORY NO.: 3-1410 Consulting Hydrologist PROJECT NO .: 70249 P.O. Box 428 ADDRESS: Waterbury, VT 05676 DATE OF SAMPLE: 8/17/93 DATE OF RECEIPT: 8/18/93 S B Collins/Milton Mobile SAMPLE LOCATION: 8/24/93 DATE OF ANALYSIS: DATE OF REPORT: Jeff Hoffer 9/13/93 ATTENTION:

TOTAL PETROLEUM HYDROCARBONS (418.1) RESULTS

(Expressed as milligrams per kilogram [mg/kg], dry weight)

Location	Concentration
D1 A	. 64
D1 B	58





State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Genzervation
State Geologist
Natural Resources Conservation Council

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation
Hazardous Materials Management Division
103 South Main Street/West Office
Waterbury, Vermont 05671-0404
(802) 241-3888
FAX (802) 244-5141

September 23, 1993

Carl Ruprecht UST Manager S.B. Collins, Inc. 54 Lower Weldon St. St. Albans, VT 05478

RE: Petroleum contamination at the Midtown Mobil in Milton. (Site #93-1456)

Dear Mr. Ruprecht:

The Sites Management Section (SMS) has received the August 20, 1993 report outlining the subsurface assessment for the above referenced site, conducted by Jefferson P. Hoffer. This report summarizes the degree and extent of contamination encountered during the assessment on August 17, 1993. One 10,00 gallon diesel underground storage tank (UST) and three 10,000 gallon gasoline USTs were removed.

During the tank pull, soils screened in the excavation pit of the gasoline USTs had peak concentrations of 300 ppm as measured using a photoionization detector. A total of 60 cubic yards of petroleum contaminated soil (PCS) measuring over 20 ppm were stockpiled onsite. The remaining excavated soils were backfilled. PCS exhibiting readings up to 50 ppm underlying the excavation and on the sidewalls were left in place. Neither groundwater nor free product were discovered onsite. The SMS has not received the four soil samples collected for laboratory analysis, nor have the onsite photographs been received.

Based on the above information, the SMS has determined that additional work is necessary at the site in order to determine the severity of contamination present. Therefore, the SMS is requesting that S.B. Collins retain the services of a qualified environmental consultant to perform the following:

- 1. Further define the degree and extent of contamination to the soil. This may be accomplished by obtaining soil borings, digging test pits, or performing a soil gas survey.
- 2. Determine the degree and extent of contamination, if any, to groundwater. If soil is found to contain evidence of contamination at the water table, then a sufficient number of monitoring wells should be installed in locations which will adequately define the degree and extent of contamination at the site. All groundwater samples

TDD: 1-800-253-0191

- 3. Develop a plan to treat and/or monitor the stockpiled soils. The soils must be located in an area such that they have a low potential to impact nearby receptors. They must also be properly encapsulated in plastic. If the soils are to be moved offsite, the SMS or UST Program must grant permission prior to their transport.
- 4. Perform an assessment of the site to determine the potential for sensitive receptors to be impacted by the contamination. This should include nearby surface water, and any public or private drinking water wells which are located within the vicinity of the site. If any water supplies appear at risk from this contamination, they should be sampled and analyzed using EPA 8020.
- 5. Determine the need for a long term treatment and/or monitoring plan which addresses the contamination present at the site. The need for such a plan should be based on the results of the above investigations.
- 6. Submit to the SMS a summary report which outlines the work performed as well as providing conclusions and recommendations. Included should be detailed well logs, analytical data, site map, area map, and a groundwater contour map.

Please have your consultant submit a preliminary work plan and cost estimate within fifteen days of your receipt of this letter so that it may be approved prior to the initiation of onsite work. The underground storage tanks at the Midtown Mobil are covered by the Petroleum Cleanup Fund as set forth in 10 V.S.A. Section 1941. An owner or permittee of an underground storage tank, who is not in significant violation of his or her permit, is eligible for reimbursement from the fund. The owner or permittee must pay for the removal or repair of the failed tank and for the first \$10,000 of the cleanup; after that the fund will reimburse the tank owner or permittee for additional cleanup costs up to \$1 million. Additionally, the Secretary of the Agency of Natural Resources reserves the right to seek cost recovery of fund monies spent at the Midtown Mobil site if the Secretary concludes that S.B. Collins is in significant violation of the Vermont Underground Storage Tank statute (10 V.S.A., Chapter 59). If you have any questions, please feel free to call.

Sincerely,

Chuck Schwer, Supervisor Sites Management Section

cc: Milton Selectboard
DEC Regional Office

jesoo!/wp/931456

Mr. Carl Ruprecht, UST Manager S.B. Collins, Inc. 54 Lower Welden Street St. Albans, Vermont 05478

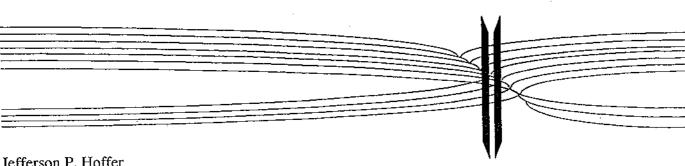
Re: Scope of Work for Hydrogeologic Investigation

Midtown Mobil, Milton, VT

Dear Carl;

The following scope of work has been prepared for a hydrogeologic investigation at the Midtown Mobil in Milton, Vermont. This investigation is prompted by evidence of a release of petroleum product discovered during the removal of three 10,000-gallon gasoline USTs and one 10,000-diesel UST. Soils surrounding and underlying the gasoline tanks were screened with a photo-ionization detector (PID) and exhibited up to 300 ppm organic vapors. Analytical results of soil samples collected at the site are summarized on the enclosed Table 1. No holes were found in the tanks, and no free product was discovered. Soils encountered during the tank excavations were uniform sand (med/coarse) with occasional fine gravel to a depth of 11 feet, underlain by a fine sand. No groundwater was detected during the tank excavations, which extended to a maximum depth of 12 feet. Additional background information is contained in my August 20, 1993 letter describing the tank removals.

This scope of work has been developed to investigate the nature and extent of contamination at the site. The primary focus will be to define site hydrogeologic characteristics and groundwater flow directions, and to determine the extent of groundwater contamination (BTEX/MTBE concentrations and distribution). This will be accomplished by installing and sampling five groundwater monitoring wells at the site. A general site characterization will also be performed to identify potential receptors such as water-supply wells and surface waters.



Jefferson P. Hoffer P.O. Box 428, Waterbury, Vermont 05676

SCOPE OF WORK

The following work items will be performed at the site.

• General site characterization - Information on the site environmental setting will be collected from such sources as USGS topographic maps, SCS maps, geologic and hydrologic reports, and the Water Supply Division's water well inventory database. The nearest water-supply wells identified in the database will be field located and included on site maps presented in the report. Surface waters and other relevant hydrologic features in the vicinity will also be identified.

A site location map will be prepared using a 1:24,000 USGS topographic map as a base. A site vicinity map will be prepared using a 1:5,000 orthophoto or enlarged USGS topographic map to display local features. A site map at a scale of 1 inch = 50 feet will be used to display monitoring well locations, groundwater elevation contours and flow directions, and contaminant distribution.

• Groundwater monitoring well installation. Groundwater was not encountered at the site to a depth of 12 feet. State files on nearby hazardous sites were reviewed to obtain information on groundwater conditions in the vicinity. At the Atlantic Service Station (about 1 mile southeast), groundwater occurs at or above a clay horizon at five feet and flows northeastward. At Marty's Mobil and Rowley Fuels (about 1 mile north), groundwater occurs between zero to five feet in a fine silt and flows southward. The Midtown Mobil site is at a higher elevation than these sites, and is underlain by coarser sediments. It is anticipated that groundwater occurs at a depth between 12 and 20 feet. Two surface-water streams are located southeast of the site, and shallow groundwater at the site likely flows toward these local groundwater discharge areas. Thus the anticipated groundwater flow direction at the site is southeastward.

Five soil borings/monitoring wells are proposed at the site. Proposed locations are presented on the enclosed Figure 2, and are based on expected groundwater flow directions. Well #1 is sited in the inferred upgradient direction. Wells #2 and #3 are in the downgradient direction within ten feet of the former tank locations, outside of the excavation. Wells #4 and #5 are sited in the downgradient direction.

Boreholes will be advanced using hollow-stem augers. Split-spoon samples will be collected every five feet. Split-spoon samples and cuttings returned on the auger flights will be visually inspected and described according to USDA classifications.

Soil samples will be collected from the split-spoons and field-screened using a PID to qualitatively assess soil contamination. Soil samples will be collected from the split spoons and placed into plastic bags or glass jars, in preparation for field screening with the PID.

Boreholes will be advanced approximately five feet below the water table. If a change in stratigraphy is not noted to this depth, at least one boring will be advanced until a change in stratigraphy is encountered, or a maximum depth of 40 feet.

Page 3 Mr. Carl Ruprecht October 12, 1993

Wells will be constructed with 10 feet of two inch factory-slotted (10 or 20-slot), flush-thread, PVC well screen. The well screen will be positioned so that approximately five feet of screen is below the water table. Flush-thread PVC riser will be extended from the screen to the ground surface. The well screens will be backfilled with an appropriately-sized, commercially-sorted sand. Geologic and monitoring well construction logs will be prepared to document the stratigraphy and well construction details.

After well installation, the wells will be developed by either bailing or pumping. All development waters will be collected and placed into 55-gallon drums at the site.

During the well drilling and installation activities, a PID will be utilized to monitor for the presence of organic vapors. The vapor monitoring will be used to detect zones of contamination, and also to monitor worker air-space for health and safety concerns.

• Groundwater sampling. One round of groundwater sampling will be performed. Samples will be collected from each of the monitoring wells. The monitoring wells will be purged of three well volumes by bailing or pumping. Samples will be collected using a Teflon™ bailer equipped with a bottom-emptying stopcock to minimize sample agitation. All sampling equipment will be decontaminated between sampling points with an Alconox™ scrub/tap water rinse/methanol rinse/deionized water rinse. Quality assurance/quality control samples will include a trip blank, a field/equipment blank, and a blind duplicate. The trip blank will be provided by the laboratory and will be transported to the site, handled the same as other samples, and returned to the laboratory for analysis. The field/equipment blank will be prepared by pouring deionized water through the teflon sampling bailer, to determine the effectiveness of the decontamination procedure and possible sample exposure to airborne contaminants.

The samples will be properly labeled and placed into a cooler with ice. The samples will be transported to a laboratory and analyzed for BTEX and MTBE using EPA Method 602. A laboratory chain-of-custody form will be utilized to document the sampling event.

- Groundwater elevation surveys, Monitoring well elevations will be surveyed to allow calculation of groundwater elevations. If possible, site elevations will be measured relative to a USGS benchmark in feet above mean sea level. If not, an on-site benchmark will be assigned an arbitrary reference elevation. Two water-level surveys will be performed. The initial survey will occur a few days after the installation/development of the monitoring wells. A second round of water-level measurements will be taken at the time of groundwater sampling. Groundwater elevation maps will be prepared for both water-level surveys.
- Report preparation. All information collected during the investigation will be incorporated into a final report. The report will describe the environmental setting, the nature and extent of contamination found at the site, and potential receptors. The report will include logs, tables, vicinity and site maps, contour maps, cross-sections, and other figures, as appropriate. The report will also provide recommendations concerning subsequent investigations or remediation efforts which may be deemed necessary at the site.

• <u>Health & Safety</u>. A Health & Safety Plan will be prepared for work performed at the site.

ESTIMATED COST

Estimated costs to perform this investigation are as follows;

Hydrogeologic Consultant - Jefferson P. Hoffer (see enclosed cost estimate sheet)	\$2	2,622
Well Contractor - (5 wells @ \$750/well)	\$3 ©	3 ,75 0 5, 250
HNU Rental - (2 days x \$75/day)	\$	150
Surveyor - (4 hours @ \$75/hr)	\$	300
Laboratory - (8 samples @ \$65/per)	\$	520
TOTAL	\$7	,342

2,622

My portion of the work will be performed on a time and expense basis not to exceed an estimated cost of \$2,902. A detailed cost estimate sheet is attached and includes a breakdown of estimated labor charges, rental fees, and travel expenses.

All services will be provided and billed in accordance with the attached Standard Terms. S.B. Collins acknowledges having read and agreed to these rates and terms upon acceptance of this proposal. This proposal will remain open for 30 days.

I thank you for the opportunity to be of service to S.B. Collins. You can authorize the work by signing below or issuing a contract agreement or purchase order.

Respectfully submitted,		Accepted by:	
Jeffel Steffen	e:		
Jefferson P. Hoffer Consulting Hydrogeologist	Ā	Authorized Signature	
		Title	Date

Enc.

TABLE 1
Soil sampling results, Midtown Mobil, Milton, Vermont.

Total Petroleum Hydrocarbons in mg/Kg

Sample ID	Depth (1)	TPHC
D1-A	0.5	64
D1-B	0,5	58

BTEX AND MTBE Results in µg/kg

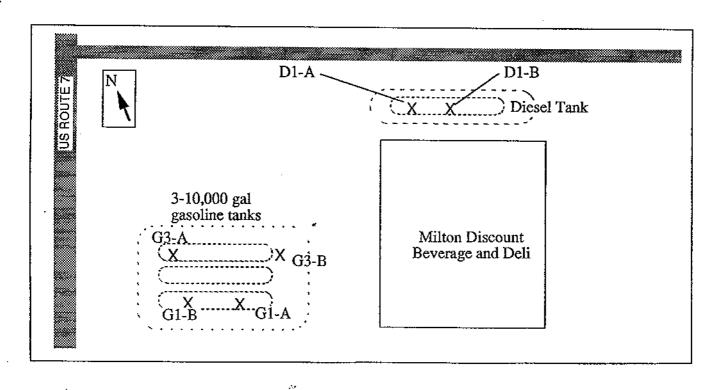
Sample ID	Depth (1)	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
G1-A	0.5	22	25	58	423	75
G1-B	0.5	<10,060	43,200	<10,000	526,000	£40,000
G3-A	2	-65	5	, ,5	17	<5
G3-B	0.5	10	17	5	109	104

NOTES:

<10,000 = less than a detection limit of 10,000

(1) Feet below tank.

SAMPLING LOCATIONS



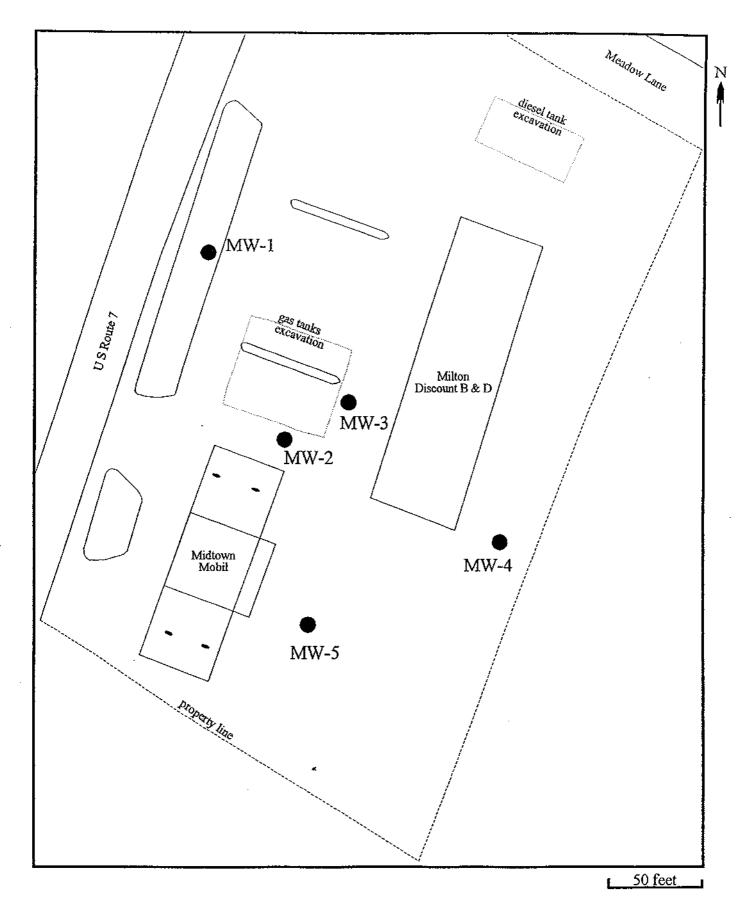


FIGURE 1
Proposed monitoring well locations,
Midtown Mobil, Milton, Vermont.

APPENDIX B:

Water Well Logs and Milton Water System Map

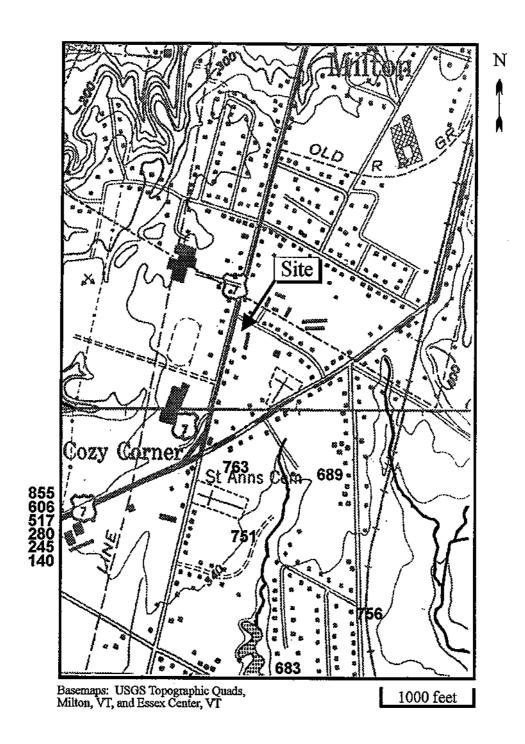


FIGURE B-1
Approximate locations of nearby water wells,
(3-digit Water Resources identification number),
Milton, Vermont.

TABLE B-1 Summary of well logs of nearby water wells, Milton, Vermont.

	WR#140		WR#245		WR#280		WR#517		WR#606		WR#683	
	Depth	Description	Depth	Description								
	0-160	sand	0-10	sand	0 -20	brown sand	0-30	sand/silt	0-90	fine bn sand	0-40	sand
	160-195	clay	10-160	gray clay	20-60	clay	30-190	blue clay	90-150	fine silt	40-60	blue clay
	195-210	green shale	160-168	sand/gravel	60-106	gray sand	190-197	gravel	150-212	gray clay	60-80	quick sand
			168-177	shale/slate	106-448	gn bedrock			212-218	gravel	80-98	hard pan
	'									_	98-101	sand
			İ								-	ļ l
completion	198' casing	(bedrock)	176' casing	(bedrock)	108' casing	(bedrock)	196' casing	(gravel)	218' casing	(gravel)	101' casing	(gravel)
static level	, i		55'					·	_	_	53'	
yield	10 gpm		30 gpm		20 gpm		45 gpm		100 gpm		26 gpm	

	WR#689		WR#751		WR#756		WR#763		WR#855	.,
	Depth	Description	Depth	Description	Depth	Description	Depth	Description	Depth	Description
	0-30	sand	0-40	sand	0-98	s/g, clay	0-50	fine sand		
	30-230	blue clay	40-210	blue clay	98-103	shale	50-215	blue clay	224-274	bedrock
	230-248	gravel	210-230	sand	103-202	?	215-223	gravel		
		٠.	230-304	gravel		•	223-269	dense till	-	,
			304-620	limestone						
completion static level	237' casing	(gravel)	308' casing	(bedrock)	105' casing	(bedrock)	269' casing	(gravel)	(deepened)	(bedrock)
yield	15 gpm		4 gpm		4 gpm		7 gpm		10 gpm	

WELL NUMBER		Field Loc Map Des 12C-5
2	1287	La. 44°38 /L" Alt 475 TS
(For Driller's Use)	State of Vermont	Lo. 73° 05'45' 1 HU 0 201000 S Scale: 62500 ,25000 ,24000 S
	DEPARTMENT OF WATER RESOUR	CL
(This report must be completed and submitted to the Department of Water Resources, State Office Building,	WELL COMPLETION REPOR	D NOT FILL IN
Montpelier, Vermont 05602, no later	MAY 1 9 1975	7-140
than 60 days after completion of well. Complete or line out all blanks.)		
	Dept. of Water Resources	
WELL OWNER Sloyd Sull Name	best Mt View	Heights, Multon, U
TOWN IN WHICH WELL IS LOCA'		(Please locate well on a large scale map to accompany this
DATE WELL WAS COMPLETED:	2/25/15	report. Maps are available on request.)
PROPOSED USE OF WELL:	☐ Domestic ☐ Agricultural ☐ Municipal ☐ Industrial	☐ Business Establishment ☐ Other (Specify)
DRILLING EQUIPMENT:	☐ Cable Tool ☐ Rotary ☐ ☐ Other (Specify)	
TOTAL DEPTH OF WELL:	STATIC WATE	
CASING DETAILS: Length 1.7.8 Weight 1.9.	3 ft. Diameter Gin. Materia 45 lb./ft.	1 Deef
SCREEN DETAILS: Make		Length ft.
Diameter	in. Slot Size	0.0
METHOD OF SEALING CASING TO	SCREEN OR BEDROCK: Bulle	1 Karkin Well Stal
-	or 🔲 Pumped, or 🕦 Compressed A	
	lours at /O gallons per minu	te
	ring yield test	
WELL LOG		
Depth From	clay, hardpan, shale, limestone, gran and sand (fine, medium, coarse, col	etrated, such as: peat, silt, sand, gravel, ite, etc. Include size of gravel (diameter) or of material, structure (loose, packed,
Ground Surface	cemented, hard). For example: Sur to 134 ft. gray granite.	face to 27 ft. fine, packed, yellow sand;
Surface to 100 ft. sand		
100 to 160 ft. 1997	sand	
160 19 DIL Way		
160 to 195th Clay	shale	
195 to 198 th green	nshall	
	n shall y	ELD TEST DATA IN G.P.M. sted at different depth during drilling, List Below
195 to 198 th green	n shall y	ELD TEST DATA IN G.P.M. sted at different depth during drilling,
195 to 198 tt. green 198 to 20tt. gree tt.	n shall y	ELD TEST DATA IN G.P.M. sted at different depth during drilling, List Below
195 to 198 st. green 198 to 210 st. gree st.	n shall y	ELD TEST DATA IN G.P.M. sted at different depth during drilling, List Below G.P.M.
195 to 198 ft. green 198 to 20 ft. ft. ft. WATER ANALYSIS: Has water been	n Shall Y If yield was te If analyzed? □ Yes [∮No If Yes, Whe	IELD TEST DATA IN G.P.M. sted at different depth during drilling, List Below G.P.M. G.P.M.
ft. ft. WATER ANALYSIS: Has water been Include Analysis DRILLED BY: N.O. May	n Shall Y Y If yield was te If yield was te n analyzed? □ Yes 呼No If Yes, Whe	ELD TEST DATA IN G.P.M. sted at different depth during drilling, List Below G.P.M. G.P.M. G.P.M.
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ft. ft. ft. WATER ANALYSIS: Has water been Include Analysis DRILLED BY: W.O. May	n Shall If yield was te If yield was te n analyzed? □ Yes ⑤No If Yes, Whe nosh Manash Corp	IELD TEST DATA IN G.P.M. sted at different depth during drilling, List Below. G.P.M. G.P.M. G.P.M. G.P.M. Company

well number

(For Driller's Use)

1287

WR 245 USGS MTW 228
Field Loc W Map Des 12 B-7
La. 444°31'12" Alt 330 TST
Lo. 13°01'52" [] HU 02010005
Scale:62500[],25000[],24000[]

State of Vermont DEPARTMENT OF WATER RESOURES WELL COMPLETION REPORT

(This report must be completed and submitted to the Department of Water Resources, State Office Building, Montpelier, Vermont 05602, no later than 60 days after completion of well.

DO NO	OT FILL IN
	243

PROPERTY T		
WELL OWNER (11) iso	n Labelle Milton, Vt	٠.
OWNER	Name Mailing Address	
TOWN IN WHICH WE	ELL IS LOCATED: some (Please locate well on	a large
	OMPLETED: 9/23/77 scale map to accompany report. Maps are avail	ny thie
DATE WELL WAS CO	request)	
PROPOSED USE OF V	WELL: Domestic	nt
DRILLING EQUIPMEN	☐ Municipal ☐ Industrial ☐ Other (Specify)	
DIMINATION INCOME MEAN	Other (Specify)	
TOTAL DEPTH OF W	Other (Specify) STATIC WATER LEVEL: 551	
	Length 175 ft. Diameter 6 in. Material steel	· · · · · · · · · · · · · · · · · · ·
	ght17	
SCREEN DETAILS: N	Make none Material Length	<i>ېنى</i> مىنىسىيىتىنىن
Dian	meter in. Slot Size	
	IG CASING TO SCREEN OR BEDROCK: Drive shoe	· · · · · · · · · · · · · · · · · · ·
	☐ Bailed, or ☐ Pumped, or ☐ Compressed Air	
	5 Hours at 30 gallons per minute	
t in the second second	ter level during yield test 150	
WELL LOG		
	Give description of formations penetrated, such as: peat, silt,	sand, grav
Depth From	clay, hardpan, shale, limestone, granite, etc. Include size of gra-	vel (diamet
Depth From Ground Surface	clay, hardpan, shale, limestone, granite, etc. Include size of gra- and sand (fine, medium, coarse, color of material, structure (l cemented, hard). For example: Surface to 27 ft. fine, packed,	vel (diamet loose, pack
Ground Surface	clay, hardpan, shale, limestone, granite, etc. Include size of gra- and sand (fine, medium, coarse, color of material, structure (l cemented, hard). For example: Surface to 27 ft. fine, packed, to 134 ft. gray granite.	vel (diamet loose, pack
Ground Surface Surface to 10 ft.	clay, hardpan, shale, limestone, granite, etc. Include size of grand and sand (fine, medium, coarse, color of material, structure (cemented, hard). For example: Surface to 27 ft. fine, packed, to 134 ft. gray granite.	vel (diamet loose, pack
Ground Surface Surface to 10 ft. 10 to 160 ft.	clay, hardpan, shale, limestone, granite, etc. Include size of grand and sand (fine, medium, coarse, color of material, structure (least community). For example: Surface to 27 ft. fine, packed, to 134 ft. gray granite.	vel (diamet loose, pack
Ground Surface Surface to 10 ft. 10 to 160 ft. 150 to 163 ft.	clay, hardpan, shale, limestone, granite, etc. Include size of grand and sand (fine, medium, coarse, color of material, structure (cemented, hard). For example: Surface to 27 ft. fine, packed, to 134 ft. gray granite. Sand agravel	vel (diamet loose, pack
Ground Surface Surface to 10 ft. 10 to 160 ft.	clay, hardpan, shale, limestone, granite, etc. Include size of grand and sand (fine, medium, coarse, color of material, structure (cemented, hard). For example: Surface to 27 ft. fine, packed, to 134 ft. gray granite. Sand agravel	vel (diamet loose, pack
Ground Surface Surface to 10 ft. 10 to 160 ft. 150 to 163 ft.	clay, hardpan, shale, limestone, granite, etc. Include size of grand and sand (fine, medium, coarse, color of material, structure (cemented, hard). For example: Surface to 27 ft. fine, packed, to 134 ft. gray granite. Sand Pray clay Sand Gravel shale slate	vel (diamet loose, pack yellow sar
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Ground Surface Surface to 10 ft. 10 to 160 ft. 160 to 163 ft. 168 to 177 ft. to ft.	clay, hardpan, shale, limestone, granite, etc. Include size of grand and sand (fine, medium, coarse, color of material, structure (cemented, hard). For example: Surface to 27 ft. fine, packed, to 134 ft. gray granite. Sand Tay clay Sand Tay clay Sand Tiguel Shale slate YIELD TEST DATA IN G.P.M. If yield was tested at different depth during List Below G.P.M.	vel (diamet loose, pack yellow sar
Ground Surface Surface to 10 ft. 10 to 160 ft. 160 to 163 ft. 163 to 177 ft. to ft. 172 ft. ft. ft.	clay, hardpan, shale, limestone, granite, etc. Include size of grand and sand (fine, medium, coarse, color of material, structure (I cemented, hard). For example: Surface to 27 ft. fine, packed, to 134 ft. gray granite. Sand Fray clay Shale slate YIELD TEST DATA IN G.P.M. If yield was tested at different depth during List Below. G.P.M. G.P.M. G.P.M. G.P.M.	vel (diamet loose, pack yellow sar
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Ground Surface Surface to 10 ft. 10 to 160 ft. 150 to 163 ft. 158 to 177 ft. to ft. 172 ft. ft. Ground Surface DRILLED BY: Galve	clay, hardpan, shale, limestone, granite, etc. Include size of grand and sand (fine, medium, coarse, color of material, structure (I cemented, hard). For example: Surface to 27 ft. fine, packed, to 134 ft. gray granite. Send Froy clay Shale slate YIELD TEST DATA IN G.P.M. If yield was tested at different depth during List Below G.P.M. G.P.M. G.P.M. G.P.M. G.P.M. G.P.M. G.P.M. C.C.L. C.E. RABTOV	vel (diamet loose, pack yellow sar

12A9 State of Vermont

DEPARTMENT OF WATER RESOURCE

WELL COMPLETION REPORT

/R 280 US	s (ntw.	18
Meld Loc 💹 👚	Map	Des 12	A -Q
-a· <u>44°37'31"</u> -o· <u>73°67'54"</u>	<u>A1</u> t_	325	TST
-0- <u>73°07'54"</u>	[] I	IU OZO	10005
Scale:62500[]	,250	000[],	24000 🔀

(This report must be completed and submitted to the Department of Water Resources, State Office Building, Montpeller, Vermont 05602, no later than 60 days after completion of well.

DO NOT FILL IN
280

Complete or line out all blanks.)	OCT 2	3 1978			
WELL Mallon	hild	Ch.	A	William, Ut. Mailing Address	ATTN
TOWN IN WHICH WELL IS LOCA		<u>_</u>	the second second	ite well on a lai	ege
DATE WELL WAS COMPLETED:	5/14/	78	scale map	to accompany the ps are available	iis
PROPOSED USE OF WELL:	☐ Domestic ☐ Municipal	☐ Agricultural ☐ Industrial		s Establishment	
DRILLING EQUIPMENT:	☐ Cable Tool ☐ Other (Specif	☐ Rotary ② y)	Air Percussio	o n	4
TOTAL DEPTH OF WELL:	99	STATIC WAT			
CASING DETAILS: Length			rial		
weight SCREEN DETAILS: Make	Ib./ft.			Length	f
	in. Slot Size			Lengui	ىلىرىنىنىنىنىنىنىنىنىنىنىنىنىنىنىنىنىنىن
WELL LOG Depth From Ground Surface	clay, hardpan, sh	of formations pe ale, limestone, gra nedium, coarse, c For example: S	mite, etc. Inclu olor of materia	de size of grave d. structure floc	l (diameter se. packe
	21 10 00 102 10 8	514) SIUIIIV.			
Surface to to ft.					V.
	un den				
20 to 60 ft. Ch	ay 10				
80 to 60 ft. 60 60 to 106 ft. gr	ay Sand				
20 to 60 ft. Ch	un Sam Pay San D In Bedrow	YI If yield was tes	ELD TEST DA sted at differen List Be	TA IN G.P.M. t depths during low	drilling,
80 to 60 ft. Of 60 to 106 ft. In 106 to 448 ft. Ine	un Sam Jay San D In Bedrou	If yield was tes	sted at differen	it depths during	drilling,
80 to 60 ft. Of 60 to 106 ft. Green 106 to 448 ft. Green 148 - 449 Water G.P.M. @ ft.	us Sam y Sall y Balvar	If yield was tes	sted at differen List Be	t depths during low	drilling
G.P.M. @ ft.	en analyzed? ☐ Yes	If yield was tes	sted at differen List Be M. @ M. @	it depths during low ft.	drilling
G.P.M. @ ft. en analyzed? [] Yes	If yield was tes	sted at differen List Be M. @ M. @	it depths during low ft.	drilling,	
### ### ##############################	en analyzed? ☐ Yes	If yield was tes	sted at differen List Be M. @ M. @	ft. ft.	drilling,

WELL NUMBER

State of Vermont

DEPARTMENT OF WATER RESOURCES AND ENVIRONMENTAL ENGINEERING

WELL COMPLETION REPORT

WATE	R RESO	UŘCE (JSE ONLY	
W.R51	<u> </u>	U.S.0	S. S	
Field Lossia	л 🗅 мс	ıp are	0.1237	_
Latitude	•	<u> </u>	"Elev	
Longituda	•			_

This report must be completed and submitted to the Department of Water Resources and Environmental Engineering, State Office Building, Mantpeller, Vermont 05602, no later

Longitude _____ "
Scale: 62,500 □, 25,000 □ DEC 1 0 1984

_	than 60 days after completion	n of the well,	Location map at	lached to WCR 513	Data in Town Fil	es ⊡	, 24,000 []
<u> </u>	uees a	Ke CoclEM	7 Micheal	1. Cote	1 Pane Cres	A Jani	milten
	WELL PURCHASE	R		\	-		0546
2.		L: TOWN ////	<u></u>		t Mailing Address		· · · · ·
3.		COMPLETED 19 14		DIVISION		LOT NO.	
3. 4.	•		Other	:	<i>,</i> • •		
- - 7. - 5.							
. J.	REASON FOR DRIE		upply, Afeplace Existing Su	and the second s		tion,	
	DOU LING FOLLOWS	the second secon	Additional Supply, 🗋 Other			_	
6.			tory with A-P, 🗆 Other				
7. 8.	TOTAL DEPTH OF W		End Casing, 🔲 Screened or S			· · · · · · · · · · · · · · · · · · ·	• • • • • • • • • • • • • • • • • • • •
9.			feet below land	1.5			
9. 10.			ground, Unfinished, 🗆 Burled, igth below L.S				Note that
10. 11.			grh below L.S ft. Diamete,				
12.			OCK. Drive Shoe, C Grou				
16.	METHOD OF SEALIN	O CASING TO BEDRO	· · · · · · · · · · · · · · · · · · ·	1-1ype	_	ft. in Bedrock	
13.	SCOEEN DETAILS:						
13.			land surface			Tt. , Siam	•10¢ µ
14.		and the second s	Air, for <u>1</u> Hou				
	11220 1201. 2011		ed by 🔀 Bucket, 🗌 Orifoce (ditalia par limitate	П в	nent Airline install
. 15.	STATIC WATER LEVI		below land surface , Date or Tim		Ouastlama et	Q 1 67 AIIQ	ment willing thesion
16.		 Control of the control /li>	Yes No. If Yes, Where		OVAPTIONS OF	0.7. m.	
17.	SPECIAL NOTES:	Tar the water been undigited ? C.					
18.	WELL LOG				19. SITE MAP	\	
	Depth from Land Surface Wat	ter e	ermation Description		other land marks and indica		tances to the well.
	Feat Feat Because Ground	rang		Sketch	Indicate tocal street name o	ad supplyision for num	Der.
	Surface 3 0	Sand	di namatan ya Kabupatan Ka				
	30 190	Bhe Cla	*				
	190 197	Grave 1			Rte7		
					10		
		1. 建水泥油 1. 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1			1//	25/400	on Love 16
					Leans		
20.	TESTED YIELD	a daniha dusina dalilina iliab balaw	WELL DRILLED	BY: /Ylack	a Cloucke		
'.	If the yield was leated at different	Gallone Per Minute	DOING BUSINESS		7 - 5 2	/ C_	7
	1		DOING BUSINESS	HOL MALIA	Company or Busines	a Name	
			REPORT FILED E	sy. Chem	e ECL		
•			Harris of Carret		Authorized Sign		
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	S. A. S. C. Stay of a	DATE OF REPORT	17 Nov 8	Y WELL DRIL	LERS LIC. NO	36

WELL NUMBER

to the Department of Water Resources and

State of Vermont

DEPARTMENT OF WATER RESOURCES AND ENVIRONMENTAL ENGINEERING

WELL COMPLETION DEPORT

WAY	RESO	URCE U	SE ONLY
W.R. GOG		U.S.G	
Field Location			
Latitude		,	"Elev
Longitude	•	-11	"Topo
Scale: 62,50	00,2	5,000	0, 24,000 □
Data In Town			

	Environmental Engineering, State Office Building, Montpelier, Vermant 05602, notater Histor 60 days after compitation of the well. Location may affected to WCR Data In Town Files 1.1
Į,	WELL OWNER Shirle, + madeline Minor Box 54 Westford BRH
٠.	OR Permanent Mailing Address
	WELL PURCHASER Name Norma N
2.	LOOK 101 OF WELE; 10 WI COT 110
3.	DATE WELL WAS COMPLETED 24 Sept 86
4.	PROPOSED USE OF WELL: Domestic, Dolher funeral home
5.	REASON FOR DRILLING WELL TO New Supply, [Replace Existing Supply, [Deepen Existing Well, [] Test or Exploration,
	Provide Additional Supply. Other
6.	DRILLING EQUIPMENT. Cable tool, & Rotory with A-P. Coliner
7.	TYPE OF WELL: O Open Hole in Bedrock, & Open End Casing, O Screened or Slotted; O Other
8.	TOTAL DEPTH OF WELL: 2/8 reel before land surface.
9.	CASING FINISH. Above ground, Finished, Above ground, Untinished, Burred, Annie Pie, Removed, None yeard, Other
10.	CASING DETAILS: Total length 218 11 Length below L. 5 2/7 11 Dio 6 in Moterial Dell WI 19 10.11.
1.	LINER OR INNER CASING DETAILS, Length used It Diameter in Material Weight (b./ft.
2.	METHOD OF SEALING CASING TO BEDROCK Drive Shoe. D Grove-type, Drilled in hole 15. in Bedrock
	Doing francoled in granel
3.	SCREEN DETAILS: Make and Type
	Slot Size, Depth to top of screen in feet below land surfaceft , Gravet backiff used: Gravel Size or Type
14.	YIELD TEST: Boiled, D Pumped, Compressed Air, for libus of Collons per minute
	Measured by 🏚 Bucket, 🗆 Oriface pipe, 🖸 Wier, 🚨 Meter
5.	STATIC WATER LEVEL feet below land surface . Date or Time measured Overflows at G.P.M.
6.	WATER ANALYSIS. Has the water been analyzed? D Yes D No. If Yes, Where
7.	SPECIAL NOTES:
8.	WELL LOG
	Depth from Land Surface Water Sketch Indicate local street name and subdivision for number
	Ground Q n T D D D D D D D D D D D D D D D D D D
	Ground 90 Fine Brown sand Well is approx fulling
gi.	90 150 Fine oilt 100 from hilds
	150 210 Han gray Clay
	212 218 Brank Quell
20.	TESTED YIELD WELL DRILLED BY: Land Cherolis
έĖ.	If the yield was lested of different depths during drilling, list below
	Gallons Per Minute DOING BUSINESS AS: Cherolic Company or Business Name Company or Business Name
. !	La OPL
. :	REPORT FILED BY: Authorized Signature
	36

WELL NO. /TAG NO.

State of Vermant Dept. of Environmental Conservation 103 South Main Street (ION) Waterbury, Vt. 05676

DEP E () 8.	. •		SE ONLY
Field ocati	on □ Mo	ap area	1203
Latitude	•	1	Elev
Longitude	٠		
Scale: 62,50	00 0,2	5,000	Topo □_, 24,000 □
Data la Town			

103 South Main Street (ION), Wa 05676 no later than 60 days aft of the well.		MAR 1 7 1988 Location map attached to W		le
WELL OWNER 6	mand fo	unsworth	N. Rd	milla
OR	Name		Permanent Mailing Address	1 m 117
WELL PURCHASER	Ste Wal		Mis Ka	millon
LOCATION OF WELL	TOWN Mill	suadivisio	Permanent Mailing Address	LOT NO
DATE WELL WAS CO	OMPLETED <u>Z</u> //	16/88		
PROPOSED USE OF		· · · · · ·	·	
REASON FOR DRILL	ING WELL! - New Sur	pply, & Replace Existing Supply, 🛘 Dee	pen Existing Well, [] Test	or Exploration,
	and the second of the second o	Additional Supply, 🔲 Other		
DRILLING EQUIPME				
		End Casing, () Screened or Slatted; ()		
TOTAL DEPTH OF W			THE TANK THE	
		ground, Unfinished, 🔲 Burled, 🛄 in Pit, 🗀		
		Ith below L.S. 10 11 Dio. 6	•	W1 Ib./f1.
LINER OR INNER CAS	SING DETAILS: Langth	used ft. Diameter	_ In. Moterial	Weight (b./ft.
METHOD OF SEALING	G CASING TO BEDRO	OCK: 🗆 Orive Shoe, 🗆 Grout – type 🔔	, Orilled	in hole ft. in Bedrock
		ather Officer	d grove	o well.
SCREEN DETAILS: Me		Material		athft., Diameter
		and surfaceft., Gravel	Anch Iduand' Convel Size As To	
i e		ONG SUITOCE	hoes is asset, distal bite of 'i.	P4
YIELD TEST. A Boiled,		Ir, for	G Gallons per mine	
STATIC WATER LEVE WATER ANALYSIS: M SPECIAL NOTES: 2	Magaurer 1. 53 teet be as the water base analyzed ? 0 1	d by C Bucket, C Oriface pipe, C Wie alaw land surface, Date or Time measured Yes 27 No. If Yes, Where	G Gollons per minu	Dermanent Airline instant at G.P.M.
STATIC WATER LEVE WATER ANALYSIS: H SPECIAL NOTES: 2 WELL LOG	Measurer 1. 53 test be go the water been analyzed?	d by Bucket, Oriface pipe, Wie niaw land surface, Date or Time measured Yes 22 No. If Yes, Where	G Gollons per minu G Gollons per minu G Overflow G Overflow 19. SIT! Show perman	Permanent Airline instance of P.M. Color MAP ent structure such as buildings, expitat anks, and/or
STATIC WATER LEVE WATER ANALYSIS: M SPECIAL NOTES: 2	Measurer 1. 53 test be as the water been analyzed? Will Morre.	d by Bucket, Oriface pipe, Wie niaw land surface, Date or Time measured Yes 22 No. If Yes, Where	Gollons per minu	Dermanent Airline instine atGPM Color MAP
STATIC WATER LEVE WATER ANALYSIS: H SPECIAL NOTES: WELL LOG Depth from Lond Surface Work Fact Feet Beeri Ground (1 p) 22	Magaurer 1. 53 reet ba ge the water been analyzed? 1 1	d by Sucket, Oriface pipe, Wie	Gollons per minu	Permanent Airline instite at G.P.M. EMAP ent structure such as buildings, septic tanks, and for this and indicate not less than two distances to the well street name and subdivision lat number.
STATIC WATER LEVE WATER ANALYSIS: H SPECIAL NOTES: A WELL LOG Depth from Land Surface Work Fact Feet Beerl Ground Measurer teer be at the water been analyzed?	d by Sucket, Oriface pipe, Wie	Gollons per minu Gollons per minu Governous Governous 19. SIT! Show perman molecule local indicate local Sketch S	Permanent Airline instite at G.P.M. EMAP ent structure such as buildings, septic tanks, and for this and indicate not less than two distances to the well street name and subdivision lat number.	
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STATIC WATER LEVE WATER ANALYSIS: H SPECIAL NOTES: A WELL LOG Depth from Lond Surface Work Fact Feat Bearl Ground Ground	Magaurer 1. 53 reet ba ge the water been analyzed? 1 1	d by Sucket, Oriface pipe, Wie	Gollons per minu Gollons per minu Governous Governous 19. SIT! Show perman molecule local indicate local Sketch S	Permanent Airline instite at G.P.M. EMAP ent structure such as buildings, septic tanks, and for this and indicate not less than two distances to the well street name and subdivision lat number.
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STATIC WATER LEVE WATER ANALYSIS: HE SPECIAL NOTES: 2 WELL LOG Depth from Land Surface Water Fact Feet Beerl Ground Y P 22 YO CO O SC BO 95	Magaurer 1. 53 reet ba ge the water been analyzed? 1 1	d by Sucket, Oriface pipe, Wie	Gollons per minu Gollons per minu Goverflow Overflow 19. SIT Show perman other isan other isan Autor Overflow	Permanent Airline instite of P.M. G.P.M. EMAP ent structure such as buildings, septic tanks, and for this and indicate not less than two distances to the welk street name and subdivision lot number. A.A. A
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· WEL ¼ NO. / TAG NO.
280/-183A
2001-1034
(For Orillar's Usa)

This report must be completed and submitted to the Department of Environmental Conservation (03 South Main Street (ION), Waterbury, Vt. . 05676 no later than 60 days after completion

State of Vermont Dept. of Environmental Conservation 103 South Main Street (10N) Waterbury, Vt. 05676 WELL COMPLETION REPORT

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Longitude	•		Top	0
Scale: 62,5	20 □,2	5,00	00,24	,000 🗆
Data in Town	Files C			<u> </u>

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							ce Existing Supp		en Ezistina	Wall. 🗍 1	est or Exol	seation.		
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DRIL	LLING	EQUIP	MEN				Other							
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			-											9.
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STAT WAT: SPEC WEL Googh	TIC WA	NALYSI NOTES G Ad Surface Feet 30 230 243	EVEL S: Has t	he voter been dan Ba	Measure feet b	WELL C	Hours It. Ocifoce ali See, Date or Time Tee, Where	wier,	Meter	19. S Show per other land leads in indicate in	flaws at	ure such as breath of the sand sundividual	G.P.M.	ite, a
STAT WAT: SPEC WEL Googh	TIC WA	NALYSI NOTES G Ad Surface Feet 30 230 249	EVEL S: Has t	he voter been da	Measure feet b	WELL D	Hours IT. Orifoce ply Ita, Date or Time Tree, Where DRILLED B	wier,	Meter	19. S Show per other land leads in indicate in	TE MAF	ure such as brace and sundivi	G.P.M.	ite, o
STAT WAT: SPEC WEL Googh	TIC WA	NALYSI NOTES G Ad Surface Feet 30 230 249	EVEL S: Has t	he voter been da	Measure feet b	WELL D	Hours It. Orifoce ply ita, Date of Time Yea, Where Hon	wier,	Meter	19. S Show per other land leads in indicate in	TE MAF	ure such as became and subdividual formations and subdividual formations for the subdividual formation for the subdividual formation for the such as the subdividual formation for the subdividual formation for the subdividual formation for the subdividual for the subdividual formation for the subdividual for the subdivi	G.P.M.	ite, o

	WELL NO. /TAG NO.	State of Ver		EPA	RTMENT USE ONLY
	1861	 Dept. of Environmenta 103 South Main St 		E.C	U.S.G.S
	ffor Orillar's Use) This report must be completed and submitted to	Wasaan San Carlo		Field Location	Map area 1201
	the Department of Environmental Conservatio	WELL COMPLETI		Latitude	Elev
	103 South Main Street (10N), Waterbury, Vt 1156 F6 na later than 60 days after completion		1 9 1989 _	Longitude	Topo
	of the well	<u>_</u>	attached to WCR	Data in Town F	
		N -97.	D A	Barrier.	1711
1.	WELL OWNER - Name	Wardy PHEART	Permaner	TOX HU	VILLEY VI OZAPA
	OR WELL PURCHASER	· · · · · · · · · · · · · · · · · · ·	•		,
	Nome Nome	Mai	Perm	onent Mailing Address	
. 2.	LOCATION OF WELL! TOWN		BDIVISION		LOT NO
3.	DATE WELL WAS COMPLET	ED 1/10/89			· · · · · · · · · · · · · · · · · · ·
4		Damestic. O Other WELL.	AB BURNE	r:/2	
				and the second s	
5 .	REASON FOR UNILLING WEI	New Supply Replace Excerting		ing Well, 🔲 Test or Explo	ration,
		Provide Additional Supply. Onh			
6.	DRILLING EQUIPMENT: 0 c	oble Tool A Rotary with A-P. 🗆 Dener _	· · · · · · · · · · · · · · · · · · ·		
7.	TYPE OF WELL: NO Open Hole in 8	ladrock, 🔲 Open End Casing, 🗇 Screened	or Slotted, 🔲 Other		
. 8.	TOTAL DEPTH OF WELL:	121	and surface.		
9.	CASING FINISH MATOR AND A	nished, 🛘 Above ground, Untinished, 🗘 Byri		G. 20.	
10	CASING DETAILS Torol lampin			, I None ware, I Other_	14
		1.4 No. 1. (1.1.)	. fr Ola . D in Hal	erial Wi	. <u> </u>
. !!.	LINER OR INNER CASING DET			welq	ht lb./ft.
12.	METHOD OF SEALING CASING	TO BEDROCK Doring Shoe, to	raut - type flins	Orilled in hold_	ft in Bedrack
	And the second of the second o	Other _ Case	in duning	war her	tol .
13.	SCREEN DETAILS, Make and Type		Wateriol	Length _	11. Diameter
•	Slot Size Depth to top of scr	ean in feet below land surface	fi., Gravel pack if uses	1. Gravel Size or Type	
14	YIELD TEST Dealed Demond,	and the state of t	4		
24,54	TILLE TEST. Counte, Crimbed,		fours of	Gallons per minute	
		Medeured by O Bucket, A Grifa	ce pipa, 🔲 Wiar, 🗀 Meta		LI Permanent Airline installed
15.	STATIC WATER LEVEL:	feet below land surface, Date or 1	[Ime measured	, Overflows at	G P M
.16.	WATER ANALYSIS, Hos the mater by			<u> </u>	
17.	SPECIAL NOTES: (Jell /	thoundaried - Filled i	with Coront	- Top 72' co	sing removed
18.	WELL LOG			19. SITE MAP	
	Depth From Land Surface Water			Show permanent struct	ure such as buildings, septic Janks, and/or the legte not less than two distances to the well
	feet Feet Bearing	Formation Description	State		e and subdivision for number
	Surface 40 2	And			
	40 210 1	lue da			
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	210 230 14	any gan			
	230 304 MA	wyguch grand,			
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	TECTER MIEL R		m no	Se (hr	skin
.20.	TESTED YIELD	WELL DRILLE	υ 81 . <u>// (</u>		
				$I \sim I \sim I$	
		DOING BUSINES	2 42 7 VAZ	TILEX COMPONY OF STATE	nose Hono
11 N			Mach	Chrise	1
·		REPORT FILED	BY: 77/22/2	/ Authorized S	gegture
			7/11/	179	7
750	* (<u></u>	DATE OF REPORT	RT: // (//	WELL DRI	LLERS LIC NO DV

	. /TAG NO.	State of Verm Dept. of Environmental	- :	PARTMENT USE ONLY
(For Orill	er's Use)	103 South Main Str		E.C. <u>756</u> U.S.G.S.
	npleted and submitted to	Waterbury, Vt. C		Field Location Map area 120
the Department of Env	ironmental Conservation	WELL COMPLETIO		Latitude*Elev
103 South Main Street 05676 no later than 6	(IUN), waterbury, Vt. O days after completion		1/20	Longitude Topo.
of the well.	-0	Location map art	oched to WCR	Scale: 62,500 🗆 , 25,000 🗖 , 24,000
	- 1/10/	D Frank 1 1001	7	N) //-
WELL OWNER	Name	C (Dearver)		To felt (Del)
OR			Parmanent i	Mailing Address
WELL PURCH	ASER		Parmona	nt Malling Address
LOCATION OF	WELL: TOWN	- milton sur	DIVISION	LOT NO.
· -		\cdot \cap \cap \cap	DIVISION	LOI NO.
	AS COMPLETE			
PROPOSED US	F OF WELL: 04	Odmestic, D Other		
REASON FOR I	DRILLING WELL	New Supply, Replace Existing Sup	oply, Deepen Existing	Well, Test or Exploration.
		🕒 Provide Additional Supply, 🗅 Other .		
DRILLING EQ	JIPMENT: D.c.	e Tool, BRotary with A-P, Other		
		rock, O Open End Casing, O Screened or S	lotted; 🛘 Other	
TOTAL DEPTH	OF WELL:	feet below land	swices.	
CASING FINISH	Above ground, Finis	had, 🗌 Above ground, Unfinished, 🗎 Buried,	☐ In Pit, ☐ Removed. ☐	Nope weed, Other
		511. Length below L.S. 10311		
				Weight (b./ft.
METHOD OF SE	ALING CASING T	TO BEDROCK DE Drive Shoe, Grow	t-type	Orilled in hole ft. in Bedrock
		Other		
SCREEN DETAI	LS: Make and Type			
VVIIICEIT DE IAI	make one rype			
Clas Cina			, Moterial	Lengthf6, Diameter
	, Depth to top of screen	n in feet below land surface	•	
		n in feet below land surface	ft. ، Gravel pack if used : G. مرحر	
	, Depth to top of screen	n in feet below land surface	_ff. Gravel pack if used: G	iravel Size ar Type
	, Depth to top of screen	n in feet balow land surface Compressed Air, for Hour	_ff. Gravel pack if used: G	iravet Size ar Type
YIELD TEST; C	, Depth to top of screet Bailed , [] Pumped , E LEVEL:	Compressed Air, for Hour Measured by Bucket, _ Oriface p	_ff. Gravel pack if used: G	iravet Size ar Type
YIELD TEST; C STATIC WATER WATER ANALY	LEVEL:	Compressed Air, for Hour	_ff. Gravel pack if used: G	iravet Size ar Type
YIELD TEST; C STATIC WATER WATER ANALYS SPECIAL NOTE	LEVEL:	Compressed Air, for Hour Measured by Bucket, _ Oriface p	_ff. Gravel pack if used: G	iravet Size ar Type
YIELD TEST; C STATIC WATER WATER ANALY	LEVEL:	Compressed Air, for Hour Measured by Bucket, _ Oriface p	_ff. Gravel pack if used: G	iravel Size ar Type ialians per minute Permanent Airline G.P.M.
YIELD TEST, C STATIC WATER WATER ANALY: SPECIAL NOTE WELL LOG	Bailed, Pumped, E LEVEL: SIS: Has the water been S:	Campressed Air, for Hour Measured by Bucket, Oriface p feet below land surface Date or Time analyzed? Yes No, If Yes, Where	_ft., Grovel pack if used: G is at G ipe, [] Wier; [] Meter e measured	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
YIELD TEST: C STATIC WATER WATER ANALY: SPECIAL NOTE WELL LOG	LEVEL: StS. Has the water been	Compressed Air, for Hour Measured by Bucket, _ Oriface p	_ff. Gravel pack if used: G	Permanent Airlins Overflows at G.P.M. 19. SITE MAP Show permanent structure such as buildings, septic tanks, an
YIELD TEST; C STATIC WATER WATER ANALY: SPECIAL NOTE WELL LOG Depth from Land Surface Feet Feet	Bailed, Pumped, E LEVEL: SIS: Has the water been S:	Campressed Air, for Hour Measured by Bucket, Oriface p feet below land surface Date or Time analyzed? Yes No, If Yes, Where	_ft., Grovel pack if used: G is at G ipe, [] Wier; [] Meter e measured	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALYS SPECIAL NOTE WELL LOG Depth from Lend Surfor Feet Feet Ground Surface 98	Bailed, Pumped, E LEVEL: SIS: Has the water been S:	Campressed Air, for Hour Measured by Bucket, Oriface p feet below land surface Date or Time analyzed? Yes No, If Yes, Where	_ft., Grovel pack if used: G is at G ipe, [] Wier; [] Meter e measured	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALY SPECIAL NOTE WELL LOG Depth from Lond Surface Ground Surface 98 98 103	LEVEL: SIS: Has the water been Bearing Rec	Campressed Air, for Hour Measured by Bucket, Oriface present below land surface, Date or Time analyzed? Yes DNo, If Yes, Where Formation Description	_ft., Grovel pack if used: G is at G ipe, [] Wier; [] Meter e measured	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALYS SPECIAL NOTE WELL LOG Depth from Lend Surfor Feet Feet Ground Surface 98	Bailed, Pumped, E LEVEL: SIS: Has the water been S:	Campressed Air, for Hour Measured by Bucket, Oriface present below land surface, Date or Time analyzed? Yes DNo, If Yes, Where Formation Description	_ft., Grovel pack if used: G is at G ipe, [] Wier; [] Meter e measured	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALY SPECIAL NOTE WELL LOG Depth from Lond Surface Ground Surface 98 98 103	LEVEL: SIS: Has the water been Bearing Rec	Campressed Air, for Hour Measured by Bucket, Oriface present below land surface, Date or Time analyzed? Yes DNo, If Yes, Where Formation Description	_ft., Grovel pack if used: G is at G ipe, [] Wier; [] Meter e measured	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALY SPECIAL NOTE WELL LOG Depth from Lond Surface Ground Surface 98 98 103	LEVEL: SIS: Has the water been Bearing Rec	Campressed Air, for Hour Measured by Bucket, Oriface present below land surface, Date or Time analyzed? Yes DNo, If Yes, Where Formation Description	_ft., Grovel pack if used: G is at G ipe, [] Wier; [] Meter e measured	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALY SPECIAL NOTE WELL LOG Depth from Lond Surface Ground Surface 98 98 103	LEVEL: SIS: Has the water been Bearing Rec	Campressed Air, for Hour Measured by Bucket, Oriface present below land surface, Date or Time analyzed? Yes DNo, If Yes, Where Formation Description	_ft., Grovel pack if used: G is at G ipe, [] Wier; [] Meter e measured	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALY SPECIAL NOTE WELL LOG Depth from Lond Surface Ground Surface 98 98 103	LEVEL: SIS: Has the water been Bearing Rec	Campressed Air, for Hour Measured by Bucket, Oriface present below land surface, Date or Time analyzed? Yes DNo, If Yes, Where Formation Description	_ft., Grovel pack if used: G is at G ipe, [] Wier; [] Meter e measured	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALY SPECIAL NOTE WELL LOG Depth from Lond Surface Ground Surface 98 98 103	LEVEL: SIS: Has the water been Bearing Rec	Campressed Air, for Hour Measured by Bucket, Oriface present below land surface, Date or Time analyzed? Yes DNo, If Yes, Where Formation Description	_ft., Grovel pack if used: G is at G ipe, [] Wier; [] Meter e measured	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALY SPECIAL NOTE WELL LOG Depth from Lond Surface Ground Surface 98 98 103	LEVEL: SIS: Has the water been Bearing Rec	Campressed Air, for Hour Measured by Bucket, Oriface present below land surface, Date or Time analyzed? Yes DNo, If Yes, Where Formation Description	_ft., Grovel pack if used: G is at G ipe, [] Wier; [] Meter e measured	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALY SPECIAL NOTE WELL LOG Depth from Lond Surface Ground Surface 98 98 103	LEVEL: SIS: Has the water been Bearing Rec	Campressed Air, for Hour Measured by Bucket, Oriface present below land surface, Date or Time analyzed? Yes DNo, If Yes, Where Formation Description	_ft., Grovel pack if used: G is at G ipe, [] Wier; [] Meter e measured	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
YIELD TEST; C STATIC WATER WATER ANALY: SPECIAL NOTE WELL LOG Depth from Land Surface Feet Feet Ground Surface 98 98 /03 /03 200	LEVEL: SIS: Has the water been Bearing Rec	Compressed Air, for Hour Measured by Bucket, Oriface professed Air, for Hour Measured by Bucket, Oriface professed P	ft., Grovel pack if used: G a at G ipe, G Wier; Meter measured Shetch	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALYS SPECIAL NOTE WELL LOG Depit from Land Surface Ground Surface 98 98 103 103 300 TESTED YIELD	LEVEL: SIS: Has the water been Bearing Rocc Rocc	Compressed Air, for Hour Measured by Bucket, Oriface professed Air, for Hour Measured by Bucket, Oriface professed P	ft., Grovel pack if used: G a at G ipe, G Wier; Meter measured Shetch	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALYS SPECIAL NOTE WELL LOG Depit from Land Surface Ground Surface 98 98 103 103 300 TESTED YIELD	LEVEL: BIS: Has the water been S: Bearing	Compressed Air, for Hour Measured by Bucket, Oriface profess below land surface Date or Time analyzed? Yes Date (Chay)	ft., Grovel pack if used: G a at	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALYS SPECIAL NOTE WELL LOG Depth from Lond Surface Ground Surface 98 98 /03 /03 200 TESTED YIELD I the yield was tested of d	Bailed, Pumped, E LEVEL: SIS: Has the water been S: Rec. Rec.	Campressed Air, for Hour Measured by Bucket, Oriface programmed for January Pass Day, If Yes, Where Permation Description Carpuil Clay	ft., Grovel pack if used: G a at	Permanent Airline G.P.M. 19. SITE MAP Show permanent eleuture such as buildings, septic tanks, and other land marks and indicate not less than two distances to the
STATIC WATER WATER ANALYS SPECIAL NOTE WELL LOG Depth from Lond Surface Ground Surface 98 98 /03 /03 200 TESTED YIELD I the yield was tested of d	Bailed, Pumped, E LEVEL: SIS: Has the water been S: Rec. Rec.	Compressed Air, for Hour Measured by Bucket, Oriface profess below land surface Date or Time analyzed? Yes Date (Chay)	ft., Grovel pack if used: G s at G dipe, G Wier, Meter s measured Sketch	Indicate State of Type Permanent Airline

WELL DRILLERS LIC. NO. .

WELL NO./TAG NO. (For Driller's Use)

This report must be completed and submitted to the Department of Environmental Conservation

State of Vermont Dept. of Environmental Conservation 103 South Main Street (10N) Waterbury, Vt. 05676 WELL COMPLETION REPORT

	EPART	MENI	USE OF	ILY	
E.C.	763	Lu.s.	G. Ś		٠.
	ation				
	•	-			
Scale:	de 62,500 🗆	,25,00	00 □, 2	4,000 C]
	Town Files				

	03 South Main Street (ION), Waterbury, Vt. 35676 no later than 60 days after completion	MAR 1 5 1990	c-a	Scale: 62,500 🗆,25,000 🗆,	opo 24,000 □
•:	o' the well	Location map attached to WCR	<u> 121</u>	Data in Town Files 🗆	
. L	WELL OWNER Marcel De	ostie, 722 W. Mil	ton I	alling Advoces O	5468
-	WELL PURCHASER	1	<u> </u>		· .
2.	LOCATION OF WELL, TOWN	lton SUBDIVISION		Malling Address	
	DATE WELL WAS COMPLETED 27	000011101011			
3.	PROPOSED USE OF WELL & Competition, C				
4.			- 1	The state of the s	.*
5 .	REASON FOR DRILLING WELL 20 Her	Supply, (1) Replace Existing Supply, (1) Deebel ide Additional Supply, (1) Other			
6.					
,	TYPE OF WELL! Open Hole in Bedrock, & Op	the state of the s	+ 5.8	(a) A V (b) A V (c) A V (c	•
7. 8.	TOTAL DEPTH OF WELL: 269		4r		
. = :	CASING FINISH: M Above ground, Fullanded, D Above				
.9. ·	CASING DETAILS: Total length 269 11 L				
10.	LINER OR INNER CASING DETAILS: Long				
11.					1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
12.	METHOD OF SEALING CASING TO BEDI	HOCK . A Drive Shoe, L Grout - type	. 6		
		O Olher Timeshed i			
-13.	SCREEN DETAILS: Make and Type Stor Size, Depth to top of screen in feet below				iter "
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14.					
		leured by 🗸 Sucket, 🗆 Oriface pipe, 🗅 Wier, l			sent Airline installi
15.	STATIC WATER LEVEL	and the second s	S	, Overflows at G P M	
16	WATER ANALYSIS. Has the water been analyzed *	Yee No. If Yee, Where			
17	SPECIAL NOTES:		1.52	IO CITE MAD	
18	WELL LOG			19. SITE MAP Show permanent structure such as buildings, sea Gether land marks and indicate not less than two dis	
	Depth from Land Surface Water Feet Feet Bearing	Formation Description	Shetch	Indicate local street name and subdivision to number	•
	Ground 50 Fine	Sand			
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		WELL DRILLED BY:	and	Cherelin	17 W
50	TESTED YIELD	THE PRINCIPLE OF STATES OF THE			
	Feet Gellene Per Marie	DOING BUSINESS AS	hero	alier Drilling Co	Salve
			7. ·	Company or Business Name	
		REPORT FILED BY	and	Chembu	<u>- </u>
7. Î		国际数据的发达	. 0	Additional Segmentary	3 1
		NATE OF REPORT 2 9 d	Vec.	8 9 WELL DRILLERS LIC. NO	<u> </u>

0806090493

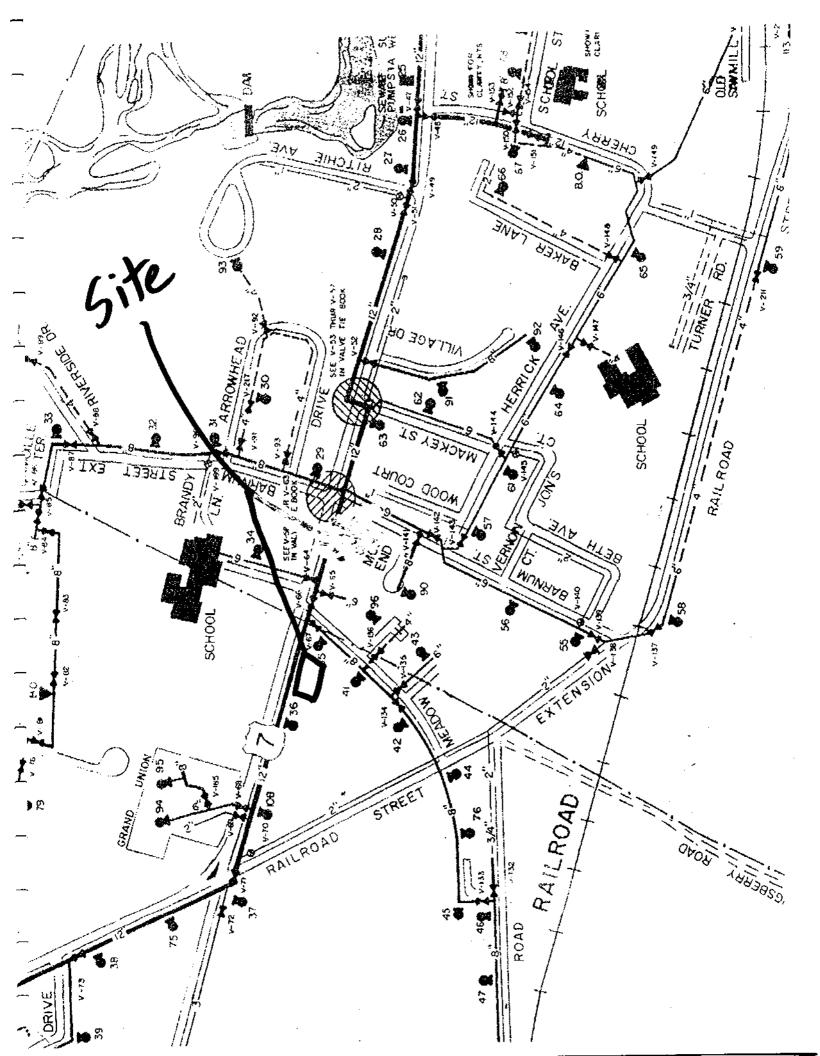
Enviropers must be completed and submitted to the Department of Edvironment of Conservation 403 South Moin Street (10N), Waterbury, Vs 03676 no later than 60 days of teccompletion

State of Vermont Dept. of Environmental Conservation 103 South Main Street (10N) Waterbury, Vt. 05676 WELL COMPLETION REPORT

OCT 5 1993

,	E.C. 855		.U.S.C	s.s	
	Fleid Locati	on D Mi	p ore	1249	
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Lecation map attached to W	к.к	Date m lown Fil	88 U
WELL OWNER Birchund Trailer Park	Kings		30TU adamilion
WELL PURCHASER	· <u>. </u>	<u> </u>	•
**		Maling Address	LOT NO.
	м ——		
DATE WELL WAS COMPLETED 9-24-93		1	_
PROPOSED USE OF WELL! Domestic, Domes	20	Delper	 .
REASON FOR DRILLING WELL: Now Supply, Replace Eciming Supply, Does		ell, 🗌 Tant or Explore	fiet,
Pravide Additional Supply, C Other			-
DRILLING EQUIPMENT: D colo Tool, & Return with A-P, D Diler			
TYPE OF WELL! Boundele in Godrock, D Open End Casing, D Screened or Sisted; D C	D##+	<u> </u>	
TOTAL DEPTH OF WELL: 274 total delign hand perfece.			
CASING FINISH) [] above ground, Finished, [] above ground, United had, [] Burled, [] In \$11, []			• •
CASING DETAILS Total length #1 Langth Below L.S ft Die			
LINER OR INNER CASING DETAILS: Langin wood11: Diseases	fn. Material _	Welgh.	
METHOD OF SEALING CASING TO BEDROCK! Doing Shop, Differed - 1990	<u> </u>	, Drilled balle	ti m Bedrech
() OIM7	<u>:</u>		 z
SCREEN DETAILS, Make and TypeMeterial	•	,Leag**	ft , Dismotor
Slot Size Dapth da top of screen in feet below land ourfaceft.g Gravel	A	evel Size or Type	
YIELD TEST: Booked, Downson, Excempressed Air, for Hours of	<u> </u>	(ióna per minute	
STATIC WATER LEVEL: Seet below tond ourfoce, Belo or Time moccured. WATER ANALYSIS: not the outer been analyzed > 1 Yes 1 Me., If No., Where			
WELL LOG	70.42	19 SITE MAP	•
Death from Land Surface Woter			e auch as buildings, sopic tanks, and go tot leasthan los distancas to the w
Fast Fast Borne Formation Description	Steleh		and subdivision for number
<i>M</i> 74	1	7	1. Station purchase
224 274 med gray bedrock			will #7
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	No.		
. TESTED YIELD	A.H	Manon	Carp
MELL DRILLED DI.		1.100/10 42-	
And have not comed to Swelling states as and a model'us state.	11		
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APPENDIX C:

Monitoring Well Logs

Well/Boring ID: MW-1

Project Name: S.B. Collins/Milton Mid-Town	Mobil WELL CONSTRUCTION
Project Number: 04-04	Total Depth Drilled: 25' BGS
Driller: Tri-State Drilling & Boring	Screen Type/Interval: 2" PVC, 10-slot from 14.3 - 24.3 BGS
Drilling Method: 4.25" ID HSA	Sandpack Type/Interval: coarse sand, 13.0-25' BGS
Geologist: J. Hoffer	Riser Type/Interval: 2" PVC from -0.47-14.3' BGS
Sampling Method: 2" split spoon	Seal Type/Interval: bentonite gravel, 7.25-13.0' BGS
Date/Time Started: 11/2/93, 0900	Measuring Point/Stickup: top of PVC Casing, flushmount
Date/Time Completed: 11/2/93, 1045	Water Level/Date/Time: 18.84 feet BTOC, 11/3/93
Weather: 30 degrees, sunny, windy	Elevation of Top of PVC: 95.71' relative to on-site benchmark
Surface Conditions: pavement	Well Development: Air-displacement pump, 1/2 hour

Split-Spoon Depth (feet)	Sample Blows (per 6")	Sample Recovery (feet)	Sample Description (color, texture, etc.)	PID* Reading (ppm)
5 - 7	4/8/7/12	1.4	Yellowish-brown medium sand (15% coarse), dry	0.4
10 - 12	4/4/5/5	1.5	Yellowish-brown medium sand, well-rounded, dry	0.3
15 - 17	2/4/8/7	1,2	Yellowish-brown fine/medium sand, dry, 2" layer of brown silt loam near top of spoon, moist	0.2
20 - 22	6/9/13/15	1.5	Brown fine/medium sand, saturated	0.2
25 - 27	3/5/5/10	1.8	Brown fine sand and silty sand, saturated	0.2

GENERALIZED GEOLOGIC LOG and OTHER OBSERVATIONS

0-0.5' pavement and sub-base material

0.5-15' medium sands, dry

15-25' fine/medium sands, finer-grained sands and increasing silt content with depth, water table between 17 and 20 feet BGS

NOTES:

* Peak Headspace Reading, Photovac MicroTIP HL-2000

Well/Boring ID: MW-2

Project Name: S.B. Collins/Milton Mid-Town Mol	il WELL CONSTRUCTION
Project Number: 04-04	Total Depth Drilled: 25' BGS
Driller: Tri-State Drilling & Boring	Screen Type/Interval: 2" PVC, 10-slot from 14.0-24.0 BGS
Drilling Method: 4.25" ID HSA	Sandpack Type/Interval: coarse sand, 12.25-25.0' BGS
Geologist: J. Hoffer	Riser Type/Interval: 2" PVC from -0.38 - 14.0' BGS
Sampling Method: 2" split spoon	Seal Type/Interval: bentonite gravel, 6.5-12.25' BGS
Date/Time Started: 11/2/93, 1120	Measuring Point/Stickup: top of PVC Casing, flushmount
Date/Time Completed: 11/2/93, 1400	Water Level/Date/Time: 18.75 feet BTOC, 11/3/93
Weather: 30 degrees, sunny, windy	Elevation of Top of PVC: 95.27 relative to on-site benchmark
Surface Conditions: pavement	Well Development: Air-displacement pump, 1/2 hour
-	

Split-Spoon Depth (feet)	Sample Blows (per 6")	Sample Recovery (feet)	Sample Description (color, texture, etc.)	PID* Reading (ppm)
5-7	7/6/6/12	1.5	top 0.75', coarse sand bottom 0.75', light brown medium/coarse sand	0.0
10 - 12	3/5/5/5	1.5	Light brown medium/coarse sand, well-rounded, dry	0.0
15 - 17	5/6/8/6	1.0	top 0.5', white fine sand, dry bottom 0.5', brown fine sand with silt, moist, petro odor	162
20 - 22	3/6/7/8	1,4	top 0.5', brown silt loam, wet bottom 0.9', brown fine sand, some silt, no odor	0.7
25 - 27	4/5/5/6	1.2	brown medium/coarse sand, uniform, well-rounded	0.0

GENERALIZED GEOLOGIC LOG and OTHER OBSERVATIONS

- 0-0.5' pavement and sub-base material
- 0.5 12' medium/coarse sands, dry
 - 15' white fine sand, dry
 - 16' fine sand and silt, moist, petro odor
 - 20' fine sand/silt, saturated
 - 25' medium/coarse sands, wet water table between 17 and 20 feet BGS

NOTES:

* Peak Headspace Reading, Photovac MicroTIP HL-2000

Well/Boring ID: MW-3

Project Name: S.B. Collins/Milton Mid-Town Mo	bil WELL CONSTRUCTION
Project Number: 04-04	Total Depth Drilled: 25' BGS
Driller: Tri-State Drilling & Boring	Screen Type/Interval: 2" PVC, 10-slot from 13.9 - 23.9' BGS
Drilling Method: 4.25" ID HSA	Sandpack Type/Interval: f/c sand, 12.0-25' BGS
Geologist: J. Hoffer	Riser Type/Interval: 2" PVC from -0.8 - 13.93' BGS
Sampling Method: 2" split spoon	Seal Type/Interval: bentonite gravel, 7.3-12.0' BGS
Date/Time Started: 11/2/93, 1420	Measuring Point/Stickup: top of PVC Casing, flushmount
Date/Time Completed: 11/2/93, 1630	Water Level/Date/Time: 17.85 feet BTOC, 11/3/93
Weather: 30 degrees, sunny, windy	Elevation of Top of PVC: 94.83' relative to on-site benchmark
Surface Conditions: pavement	Well Development: Air-displacement pump, 1/2 hour

Split-Spoon Depth (feet)	Sample Blows (per 6")	Sample Recovery (feet)	Sample Description (color, texture, etc.)	PID* Reading (ppm)
5 - 7	2/3/2/4	1.1	Brown medium/coarse sand, dry	0
10 - 12	4/4/8/9	1.0	Brown medium/coarse sand, dry (some Fe-mottling)	0
15 - 17	2/6/8/9	1.4	Top 1.0', brown silt loam, moist, mottled, petro odor Bottom 0.4', brown fine sand, moist	25.6
20 - 22	3/6/6/9	1.4	Top 0.4', brown silt loam, fine sand, wet Bottom 1.0', brown medium sand	0
25 - 27	3/4/4/10	1.8	Brown fine/medium sand, wet	0.1

GENERALIZED GEOLOGIC LOG and OTHER OBSERVATIONS

0-0.5' pavement and sub-base material

0.5 - 12' medium/coarse sands, dry

12 - 21' silt loam and fine sand, wet below 20'

21 - 27' fine/medium sand

NOTES:

* Peak Headspace Reading, Photovac MicroTIP HL-2000

Well/Boring ID: MW-4

Project Name: S.B. Collins/Milton Mid-Town Mobil	WELL CONSTRUCTION
Project Number: 04-04	Total Depth Drilled: 20' BGS
Driller: Tri-State Drilling & Boring	Screen Type/Interval: 2" PVC, 10-slot from 9.3 - 19.3' BGS
Drilling Method: 4.25" ID HSA	Sandpack Type/Interval: f/c sand, 8.0 - 20' BGS
Geologist: J. Hoffer	Riser Type/Interval: 2" PVC from -0.18 - 9.3' BGS
Sampling Method: 2" split spoon	Seal Type/Interval: bentonite gravel, 4.0 - 8.0 BGS
Date/Time Started: 11/1/93, 1300	Measuring Point/Stickup: top of PVC Casing, flushmount
Date/Time Completed: 11/1/93, 1530	Water Level/Date/Time: 17.25 feet BTOC, 11/3/93
Weather: 30 degrees, snowing	Blevation of Top of PVC: 95.39' relative to on-site benchmark
Surface Conditions: gravel	Well Development: Air-displacement pump, 1/2 hour

Split-Spoon Depth (feet)	Sample Blows (per 6")	Sample Recovery (feet)	Sample Description (color, texture, etc.)	PID* Reading (ppm)
5-7	7/8/7/10	1.3	Brown medium/coarse sand, dry	0
10 - 12	4/6/7/7	1.4	Brown fine sand, dry	0
15 - 17	7/8/7/9	1,4	brown fine sand, moist in bottom 6"	0
20 - 22	2/2/2/4	1.0	Top 0.5', brown fine sand, wet	0
			Bottom 0.5', olive-brown silt loam, saturated	

GENERALIZED GEOLOGIC LOG and OTHER OBSERVATIONS

- 0-0.5' pavement and sub-base material
- 0.5 7' medium/coarse sands, dry
- 10'--> brown fine sand, moist below 16.5 ft, silty at 21 ft water table between 16.5 and 20 feet

NOTES:

* Peak Headspace Reading, Photovac MicroTIP HL-2000

Well/Boring ID: MW-5

Project Name: S.B. Collins/Milton Mid-Town Mobil	WELL CONSTRUCTION
Project Number: 04-04	Total Depth Drilled: 22.5' BGS
Driller: Tri-State Drilling & Boring	Screen Type/Interval: 2" PVC, 10-slot from 12.3 - 22.3' BGS
Drilling Method: 4.25" ID HSA	Sandpack Type/Interval: f/c sand, 10.7 - 22.5' BGS
Geologist: J. Hoffer	Riser Type/Interval: 2" PVC from -0.57 - 12.3' BGS
Sampling Method: 2" split spoon	Seal Type/Interval: bentonite gravel, 4.9 - 10.7' BGS
Date/Time Started: 11/1/93, 1530	Measuring Point/Stickup: top of PVC Casing, flushmount
Date/Time Completed: 11/1/93, 1730	Water Level/Date/Time: 17.59 feet BTOC, 11/3/93
Weather: 30 degrees, snowing	Elevation of Top of PVC: 95.32' relative to on-site benchmark
Surface Conditions: pavement	Well Development: Air-displacement pump, 1/2 hour

Split-Spoon Depth (feet)	Sample Blows (per 6")	Sample Recovery (feet)	Sample Description (color, texture, etc.)	PID* Reading (ppm)
5-7	5/6/4/7	1.4	Brown medium/coarse sand, well sorted, dry	0
			faint mottling at 6'	
10 - 12	1/4/2/3	1.2	Light brown medium/coarse sand, 5% fine gravel, dry	0
15 - 17	4/5/11/10	1.0	Light brown fine/medium sand, dry	0
20 - 22	10/6/7/11	1.2	Brown medium/coarse sand, wet,	0
			bottom 4" is silty fine sand, wet	0

GENERALIZED GEOLOGIC LOG and OTHER OBSERVATIONS

0-0.5' pavement and sub-base material

0.5 - 22' brown medium/coarse sands, dry to 17 ft, fine/medium sands 15 - 17 ft.

21' silty fine sand

water table between 17 and 20 ft

NOTES:

* Peak Headspace Reading, Photovac MicroTIP HL-2000

Well/Boring ID: MW-6

Project Name: S.B. Collins/Milton Mid-Town M	Mobil WELL CONSTRUCTION
Project Number: 04-04	Total Depth Drilled: 26 BGS
Driller: Tri-State Drilling & Boring	Screen Type/Interval: 2" PVC, 10-slot from 16.0 - 26.0' BGS
Drilling Method: 4.25" ID HSA	Sandpack Type/Interval: f/c sand, 15 - 26.0' BGS
Geologist: J. Hoffer	Riser Type/Interval: 2" PVC from 0 - 14' BGS
Sampling Method: 2" split spoon	Seal Type/Interval: benseal 12 - 14' & 1 - 2' BGS
Date/Time Started: 12/17/93 12:00	Measuring Point/Stickup: top of PVC Casing, flushmount
Date/Time Completed: 12/17/93 14:00	Water Level/Date/Time: 20.20' BTOC, 12/20/93
Weather: 30 degrees, sunny	Elevation of Top of PVC: = 96.13' relative to on-site benchmark
Surface Conditions: grass	Well Development:

Split-Spoon Depth (feet)	Sample Blows (per 6")	Sample Recovery (feet)	Sample Description (color, texture, etc.)	PID* Reading (ppm)
4-6	2/4/6/8	1,2	light yellow/brown medium/coarse sand, dry well rounded, no fines	0.8
9 - 11	4/5/4/6	1,2	as above with some fine sand	0.9
14 - 16	2/3/5/11	1.3	light brown medium sand, damp	2.0
19-21	4/7/7/10	1.5	light brown medium sand, one 1-inch layer of silt loam, saturated in last 1.0 feet	0.8
24 - 26	1/2/2/3	0.8	0.25' as above 0.75' fine sand	0.8

GENERALIZED GEOLOGIC LOG and OTHER OBSERVATIONS

0 - 25' brown medium sand, wet below 20'

25 - 26' brown fine sand

NOTES:

* Peak Headspace Reading, Photovac MicroTIP HL-2000

Well/Boring ID: MW-7

Project Name: S.B. Collins/Milton Mid-Town M	obil WELL CONSTRUCTION
Project Number: 04-04	Total Depth Drilled: 26' BGS
Driller: Tri-State Drilling & Boring	Screen Type/Interval: 2" PVC, 10-slot from 16.0 - 26.0' BGS
Drilling Method: 4.25" ID HSA	Sandpack Type/Interval: f/c sand, 15 - 26.0' BGS
Geologist: J. Hoffer	Riser Type/Interval: 2" PVC from 0 - 14' BGS
Sampling Method: 2" split spoon	Seal Type/Interval: benseal 12 - 14' & 1 - 2' BGS
Date/Time Started: 12/17/93 14:00	Measuring Point/Stickup: top of PVC Casing, flushmount
Date/Time Completed: 12/17/93 13:30	Water Level/Date/Time: 20,48' BTOC, 12/20/93
Weather: 30 degrees, sunny	Elevation of Top of PVC: 96.69' relative to on-site benchmark
Surface Conditions: grass	Well Development:

Split-Spoon Depth (feet)	Sample Blows (per 6")	Sample Recovery (feet)	Sample Description (color, texture, etc.)	PID* Reading (ppm)
4-6	2/4/4/6	1.3	yellowish brown medium/coarse sand, dry	1.6
9 - 11	4/12/11/13	1,1	brown medium/fine sand, dry	1.4
14 - 16	3/5/9/12	1.5	0.75' yellowish brown fine sand, dry, mottled 0.75' yellowish brown fine/med. sand, dry, mottled	1.7
19 - 21	2/3/3/4	1.5	0.75' brown fine/medium sand, wet 0.75' brown medium/coarse sand, wet	8.1
24 - 26	1/2/2/1	1.8	brown medium sand, wet, slight gas odor	91.3

GENERALIZED GEOLOGIC LOG and OTHER OBSERVATIONS

0 - 26' brown sand, predominantly medium-grained, wet below 19 feet

NOTES:

* Peak Headspace Reading, Photovac MicroTIP HL-2000

APPENDIX D:

Groundwater Sampling Data

PROJECT LOCATION: Milton Md-Town Mobil Milton, V+
DATE: 11/9/93

GROUNDWATER SAMPLING DATA SHEET

ONE Bailer Purge

SAMPLE METHOD: Te flow Bailer Sample

SAMPLERS JOH

WELL	DEPTH TO	TOTAL	WATER	Gals/Foot	3 Well	Total	Sample	Sample	Chain-of-	Custody		Ì
ID	WATER	DEPTH	COLUMN	(2" = 0.163)		Purged	Time	Туре	Number	Time	Remarks	
	(ft)	(ft)	(ft)	(4" = 0.653)		(gals)	!			l		
				(6" = 1.469)				·		Feld		
Trip							Lab	Trip	TB-1	12:10	196-11/8/93	447 PM
											,	
MW-1	18.77	25	6.23	1.0	3.0	30	12:40	5	MW-1	/2:30	5. Hy Brown	•
MW-4	17.01	22.5	5.49	0.9	2.7	2.8	13:15	5	mu-4	13:00	51. 5. Ay	
MW-5	17.59	25	7.4/	1.2	3.6	4.0	13:40	5	MW-5		51.51Hy	
mw-3	17.84	20	2.16	0.4	1.2	1.5	14:05	5	mW-3	14:00	51/4 Brow.	,
MW-3	17"	×	It	//	,,	"	17	dup	mw-6	14:45	WHY Berow	45
MW-2	18.69	25	6-31	1.0	3.0	3.0	14:30	5	MW-2	14:59	Sitty Bear	ow4
							·				<u> </u>	
Feld					<u> </u>		15:00	FRUG.		16:00		
										<u> </u>		
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	<u> </u>	l <u>_</u>	<u> </u>	<u>}</u>		<u></u>	<u> </u>		<u> </u>	<u> </u>]

* REMARKS	,	7					
	*	blight	petro odor,	no steen	on piral	water	



CHAIN OF CUSTODY RECORD

•	MPLERS: Isignosures					Bill To: Carl Ruprecht 5.8. Collins, Inc. REMARKS
STA NO	DATE	COME SWIT	GNAB	STATION LOCATION	TAINERS	
TB-1				Trip Blank	2	
MW-1	11/9/4	3 12:36		MW-1		
mw-4	1	13:00		mw-4		
7W-5		13:40		MW-5		
14-3		14:00	*	MW-3 .	1.	
14-6		M:45		MW-6		
nw-2		14:59		MW-2		1 1 1
FB-1		16:0)		Field Blank		
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			!			
	<u>, , </u>					
9	16	(Signature)		Date / Time Received by: Isignatus	rej`	Retinquished by: (Signature) Date / Time Received by: (Signature)
Retinguisn	ned by:	(Signature)		Date / Time Received by: ISignatu	rei	Relinquished by: (Signature) Date / Time Received by: (Signature)
geneguist	red by:	(Signature)		Date / Time Received for Laborate 15:00 across Am Mo	ory by:	U/0/02 14:25 3~ 205/

LABORATORY REPORT

CLIENT NAME:

S.B. Collins

LABORATORY NO.:

3-2051

54 Lower Welden Street St. Albans, VT 05478

PROJECT NO .:

70249

ADDRESS:

DATE OF SAMPLE:

11/9/93

DATE OF RECEIPT:

11/9/93

SAMPLE LOCATION:

Midtown Mobil, Milton, VT

DATE OF ANALYSIS:

11/19-21/93

ATTENTION:

Carl Ruprecht

DATE OF REPORT:

11/30/93

WATER RESULTS

(Expressed as micrograms per liter [ug/L] ppb)

<u>PARAMETER</u>	<u>MW-1</u>	<u>MW-2</u>	<u>MW-3</u>	MW-4	MW-5
- Durant Pales	BPQL	25600	64	BPQL	3
Methyl Tertiary Butyl Ether	-			-	-
Benzene	BPQL	1920	4	BPQL	BPQL
- Toluene	BPQL	4100	4	BPQL	3
Ethylbenzene	BPQL	1430	BPQL	BPQL	\mathbf{BPQL}
Total Xylenes	BPQL	6800	BPQL	BPQL	BPQL
— Chlorobenzene	BPQL	< 500	BPQL	BPQL	BPQL
1,2-Dichlorobenzene	BPQL	< 500	BPQL	BPQL	BPQL
1,3-Dichlorobenzene	BPQL	< 500	BPQL	BPQL	BPQL
1,4-Dichlorobenzene	BPQL	< 500	BPQL	\mathbf{BPQL}	BPQL
Surrogate % Recovery	94%	92%	92%	92%	95%

EPA Method 8020

BPQL = Below Practical Quantitation Limit, 2 ppb.

Respectfully submitted,

Roderick J. Lamothe Laboratory Director

cc: Jefferson Hoffer

RJL/mh

_ Page 1 of 2



LABORATORY REPORT

LABORATORY NO.: 3-2051 S.B. Collins CLIENT NAME: 54 Lower Welden Street PROJECT NO .: 70249 St. Albans, VT 05478 ADDRESS: 11/9/93 DATE OF SAMPLE: DATE OF RECEIPT: 11/9/93 SAMPLE LOCATION: Midtown Mobile, Milton, VT DATE OF ANALYSIS: 11/19-21/93

ATTENTION: Carl Ruprecht DATE OF REPORT:

E OF REPORT: 11/30/93

WATER RESULTS (Expressed as micrograms per liter (ug/L) ppb)

- <u>PARAMETER</u>	<u>MW-6</u>	Field Blank	<u>Trip Blank</u>	Matrix Spike MW-1
Methyl Tertiary Butyl Ether - Benzene Toluene Ethylbenzene - Total Xylenes Chlorobenzene 1,2-Dichlorobenzene - 1,3-Dichlorobenzene 1,4-Dichlorobenzene Surrogate % Recovery	64 4 3 BPQL BPQL BPQL BPQL BPQL BPQL 92%	BPQL BPQL BPQL BPQL BPQL BPQL BPQL BPQL	BPQL BPQL BPQL BPQL BPQL BPQL BPQL BPQL	92% 96% 89% 91% 87% 86% 85% 94%

EPA Method 8020

BPQL = Below Practical Quantitation Limits; 2 ppb.

NOTE: Matrix spike expressed as percent recovery at 23 ppb spike in MW-1.





Scitest, In			CI	HAI	N OF	CU	STODY REC	CORD				
Route 66 Profession	al Center,	Randolph	, Vermont (05060				Project Na	me/Location	$\frac{1}{2}$	1.1	
Phone:(802)728-631	3 Fax:(802	2)728-6044	<u> </u>			Sheet / Project Nu	of /	10114	on M	Brojert Manager	611	
Company Name: 5 B	Colling	. I helda.	14	opy Result	126	P.O. Numb				Project Manager: Jeff Hoffer		
6 Company Address: ನ	H. Alban	newan	5478 J	EH H	other	Phone:				Scitest Acct #:		
Afri:		<u>.</u>	Fax:	Con	tainers	Matrix/						
Company Address: St. Albans Vt. 05478 Affn: Carl Kuprecht Sample Number Date Time Client Sam				nple I.D. (number/type) So					Source	Analysis Requested		
TB-1	12/1/93	4:01 80	Train	Blank	-lah	7	1	40 m L	W	8020 BTEX/1	TEC	
	12/20/93	0830	MW- 0		· · ·		2	40 - 6	W	8020 BTEX/ 1	MTBE	
MW-7	12/20/93	0850	mw-				3	40 n/	W	BOZU BTEX /1	hTBE	
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Sampler's Signature	1/ /	/	,	Number	Relinqui	shed By		Date	Time	Accepted By	Date	Time
A ddistance of a second				1		W///		- 12/20/3	15:13			İ
Additional Comme		,	1		1							
MW-7 - 945	value ada	or it pu	nge watr	3		 				Jim Mon	12/20/93	31100
					und-Time:	: [X] Normal			[]Rush		Date	

GROUNDWATER SAMPLING DATA SHEET

PROJECT LOCATION: 5BC/Midtown Plaza Mobil, Milton, V-SAMPLE METHOD: Tellon Builer
DATE: 12/20/93 SAMPLERS JPH

WELL	DEPTH TO	TOTAL	WATER	Gals/Foot	3 Well	Total	Sample	Sample	Chain-of-0	Custody	
ID	WATER	DEPTH	COLUMN	(2" = 0.163)	Volumes	Purged	Time	Type	Number	Time	Remarks
	(ft)	(ft)	(ft)	(4" = 0.653)	(gals)	(gals)					
	, ,			(6" = 1.469)							
TB-1								Trip	TB-1	12/1/93	4:01 Ph
m41-6	20.20	24	3.80	0.6	1.8	2.0	0830	Sample	MW-6	0830	(1)
mw-7	20.48	24	3.5°Z	0.6	1.8	2.0	0850	Sample	MW-7		(1) (Z)
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* REMARKS	(1)	Sample	slightly	gilty B	1044				
	(2)	Slight go	asoline o	odor in	purge	water,	no	sheet	